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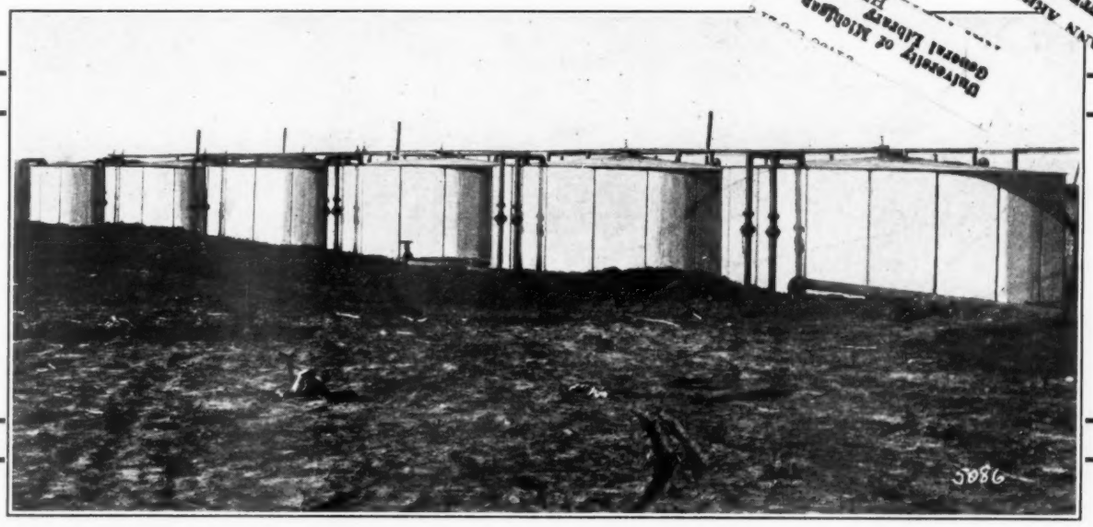

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Lid Lifted on Oklahoma Curtailment

Highest daily average estimated total production in 1928, week ended Dec. 29, 2,585,844 bbls. Lowest in 1928, May 19, 2,338,241 bbls.

Crude Price Increase in Mid-Continent Expected Soon. California Operators Continue Conservation Movement

By Andrew M. Rowley

Highest daily average estimated light oil production in 1928, week ended Dec. 29, 2,158,134 bbls. Lowest in 1928, Mar. 3, 1,927,713 bbls.

Virtual removal of proration in Oklahoma with indications that an advance in the crude oil price schedule in the Mid-Continent area may be expected in the very near future, together with assurances from progressive operators in California that efforts will be continued there, despite the action taken in Oklahoma, to hold production on the Pacific Coast more nearly to market requirements were high spot developments of the week in the crude oil production situation.

Aside from the psychological effect upon the rest of the country of the action of the Corporation Commission in Oklahoma raising the figure on permitted production of the State from 650,000 barrels daily to 725,000 barrels daily "during this period of maximum demand," the new order will have comparatively little effect on the production column. The figure of 725,000 barrels daily is believed to be considerably more than Oklahoma can produce over a period of more than a week, without new fields being found to bolster the output. Production in Oklahoma probably will show a good increase for several days after the new order becomes effective on May 16 but it is believed a decline then will be shown and the production level under the new order will not be much more than 20,000 barrels in excess of the present production figure.

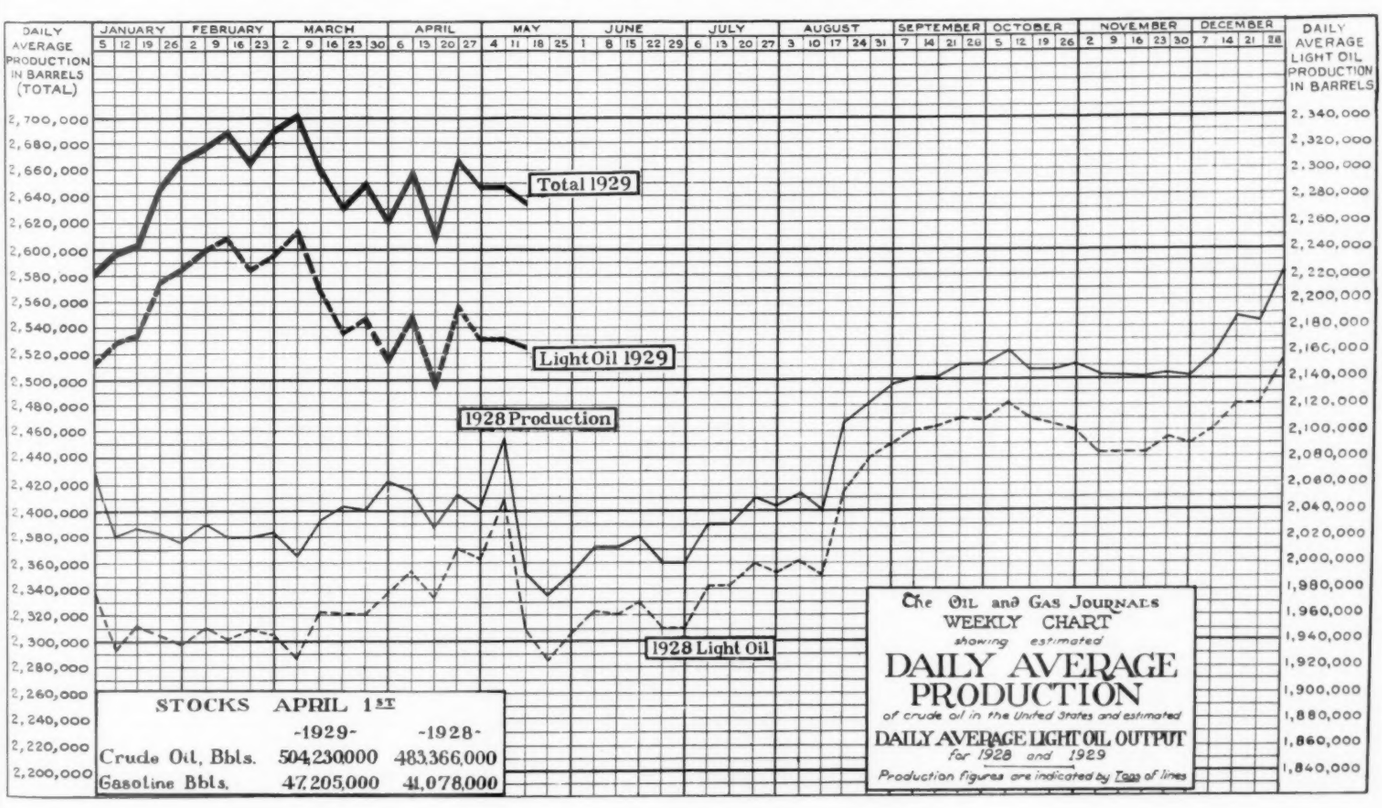
Crude oil prices in California are higher than in the Mid-Continent, crude of 36 degrees in California having a posted price of $1.59 a barrel while that in the Mid-Continent is priced at $1.20 a barrel. A crude oil price increase in the Mid-Continent will lessen this differential and make California crude more of a competitor to the Mid-Continent production. California gasoline already is affecting the gasoline price situation in the Mid-Continent area, according to some observers, and the same condition may arise in the crude market later this year.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended May 11, and a comparison with the previous week follows:

	May 11		May 4	
Oklahoma—	**Light**	**Heavy**	**Light**	**Heavy**
Tonkawa	10,380	.....	10,420	.....
Burbank	20,735	.....	20,800	.....
Other Osage Fields	24,740	.....	24,780	.....
St. Louis-Pearson	97,685	.....	101,195	.....
Cushing and Shamrock	20,545	.....	20,520	.....
Bristow	19,570	.....	19,560	.....
Allen	24,770	.....	25,670	.....
Seminole	279,985	.....	281,655	.....
Northern Miscellaneous	118,410	.....	116,540	.....
Southern Fields	54,230	.....	54,000	.....
Total Oklahoma	671,050	.....	675,140	.....
West Texas—				
Hendricks	139,750	.....	143,645	.....
Yates	89,950	.....	87,898	.....
Remainder	122,917	.....	126,015	.....
Total West Texas	352,617	.....	357,558	.....
North Louisiana	29,285	6,070	29,690	5,760
Arkansas	22,400	48,825	23,420	49,110
North Central Texas	138,432	.....	137,669	.....
Texas Panhandle	59,335	.....	60,265	.....
East Central Texas	19,489	.....	19,490	.....
Kansas	113,845	.....	111,285	.....
Total Mid-Continent Area	1,406,453	54,895	1,414,517	54,870
Gulf Coast	.....	156,876	.....	162,507
Southwest Texas	.....	74,659	.....	73,139
Eastern	113,000	.....	113,000	.....
Rocky Mountain Area	69,425	.....	71,171	.....
California—				
Santa Fe Springs	169,000	.....	163,000	.....
Long Beach	174,500	.....	174,000	.....
Torrance	2,000	11,000	2,000	11,500
Huntington Beach	43,000	.....	44,500	.....
Elwood	29,000	.....	31,000	.....
Inglewood	13,000	10,000	14,000	10,500
Ventura Avenue	54,000	.....	53,000	.....
Seal Beach	39,000	.....	37,000	.....
Remainder of State	55,000	162,000	55,000	163,000
Total California	578,500	183,000	573,500	185,000
Total United States	2,167,378	469,430	2,172,188	475,516
Grand Total		2,636,808		2,647,704

→ **Total Decrease, 10,896 Bbls.; Light Oil Decrease, 4,810 Bbls.** ←



Weather Holds Back Gasoline Demand

Prices at Larger Oklahoma Refineries Firm. High Lubricating Oil Prices May Affect Motor Fuel Market

By C. O. Willson

Unfavorable weather conditions throughout a large part of the Mid-Continent consuming territory were the controlling factor in the Oklahoma (Group 3) market during the past week so far as gasolines were concerned.

The elements which refiners feel have been unusually adverse so far this year, since the first of the month have brought forth heavy rains throughout the Middle West and the Southwest. Many of the improved highways are flooded and dirt roads have been practically impassable. As a result the usual May improvement in gasoline consumption has been postponed. This has been reflected in the gasoline being moved from Oklahoma and other Mid-Continent refineries.

This slowness in spot business has resulted in lower prices from a few plants in Oklahoma. However, the larger refiners in the State are holding to the 7¾-cent price for U. S. Motor gasoline established a week ago. These refiners concede that their movement to the jobbing trade has been slow. The weather is blamed for this condition and the prophecy is made that large orders will be received just as soon as highways are passable. In this connection several of the sellers state the gasoline orders being placed, despite the unfavorable conditions in the consuming markets, point to an exceptionally heavy demand when summer weather arrives.

Among the remaining products the price trends explained in these columns last week continue. Large buyers are still out of the natural gasoline market and small purchasers have been able to secure price concessions. Up to this time large quantities of distress material have not made their appearance so that the major manufacturers have been able to maintain prices with only minor changes.

The lower gravity fuel oils are fairly firm but the several cuts secured from crude oil, extending from the low gravity fuels to naphthas, are weak. This includes high gravity fuel oil, gas oil, distillates and kerosene. Prices on all these products generally are lower than they were a week ago. Petroleum wax can still be listed among the weak products with a low of 3 cents established during the past week for the 124-126 grade.

REFINED MARKET BAROMETER

Gasoline refinery prices throughout the United States were steady in the past week. The tank car movement was slowed up in several areas due to the continuation of adverse weather conditions. Refiners generally in these areas were holding to the prices established last week. Kerosene prices in the domestic market reflect further weakness in that product, although coastal prices for export movement have not changed. A better tone in the fuel oil market was reported in the coastal areas due to the expected curtailment of the Venezuela crude oil production and the expectation that West Texas crude oil prices would be advanced. The interior fuel oil market is generally soft as is gas oil and other products used as fuels. Steam refined cylinder, bright stocks and some grades of neutral oils again advanced sharply in the East with more moderate advances effective in the Mid-Continent. Finished motor oil prices are also higher. The Mid-Continent natural gasoline demand has been slow and prices lower. The wax market continues inactive.

Mid-Continent—Gasoline prices steady although movement to jobbers has been slow due to weather conditions. Kerosene soft and prices lower. High gravity fuel oil, gas oil, and distillate prices lower. Natural gasoline demand slow and prices lower. Neutral oil and steam refined cylinder stock prices higher.

Atlantic Seaboard—Sharp advance in lubricating oil prices. Gasoline firmer. Steady contract movement of bunker fuel oil with no change in prices. Gas oil market inactive. Demand for Diesel oil increasing and prices steady. Petrolatum stronger. Better demand for wax.

California—Prices unchanged with better movement of gasoline.

Pennsylvania—Lubricating oil prices again advanced. Kerosene and gasoline movement slow. Wax prices unchanged.

Gulf Coast—Expectation of higher prices for West Texas crude oil strengthens fuel oil prices. Neutral oil prices steady. Gasoline firm. Gas oils strong.

Chicago—Good movement of gasoline on contract, but spot demand light. Little demand for furnace oils. Kerosene weak. Fuel oil and gas oil prices generally lower.

Neutral Oils Advance

Neutral oils have joined the upward trend in steam refined stocks and bright stocks which has been under way for several weeks. The major factor in the Oklahoma market advanced prices from one-half to 2 cents a gallon. The 200 3 color was advanced one-half cent and the 280 3 color 2 cents. The greatest advances in all cases were in the higher viscosity oils. Manufacturers for several weeks have had a heavy demand for 240 and 280 viscosity oils. In the past the heaviest demand has been for the lower viscosity oils and most of the refiners operate on that basis.

Shifting the plant operation to manufacture the higher viscosity neutrals tends to reduce the yields materially. For this reason it is predicted that additional advances will materialize in the 240 and 280 oils. The heavy demand for these oils and also the steam refined stocks and bright stocks is due to greater consumption of high viscosity motor oils. This demand has already advanced Pennsylvania stocks to record prices the present quotations on steam refined stocks, bright stocks and the high viscosity neutrals being 100 to 400 per cent higher than they were a year ago. For instance a Pennsylvania 600 steam refined stock which sold around 12 cents a year ago is now bringing from 36 to 40 cents a gallon. Bright stock prices in Pennsylvania have increased approximately 100 per cent in the past year.

Oklahoma refiners have been more conservative in their price advances on lubricants. The fact that the demand has not increased as fast as it has for Pennsylvania lubricants and low crude oil prices is partially responsible for this condition. There has been evidence in recent weeks that the relatively low prices prevailing for Mid-Continent lubricants have attracted many new buyers including compounders, jobbers and eastern refiners. These buyers are using the Mid-Continent oils in preference to the higher priced Pennsylvania oils.

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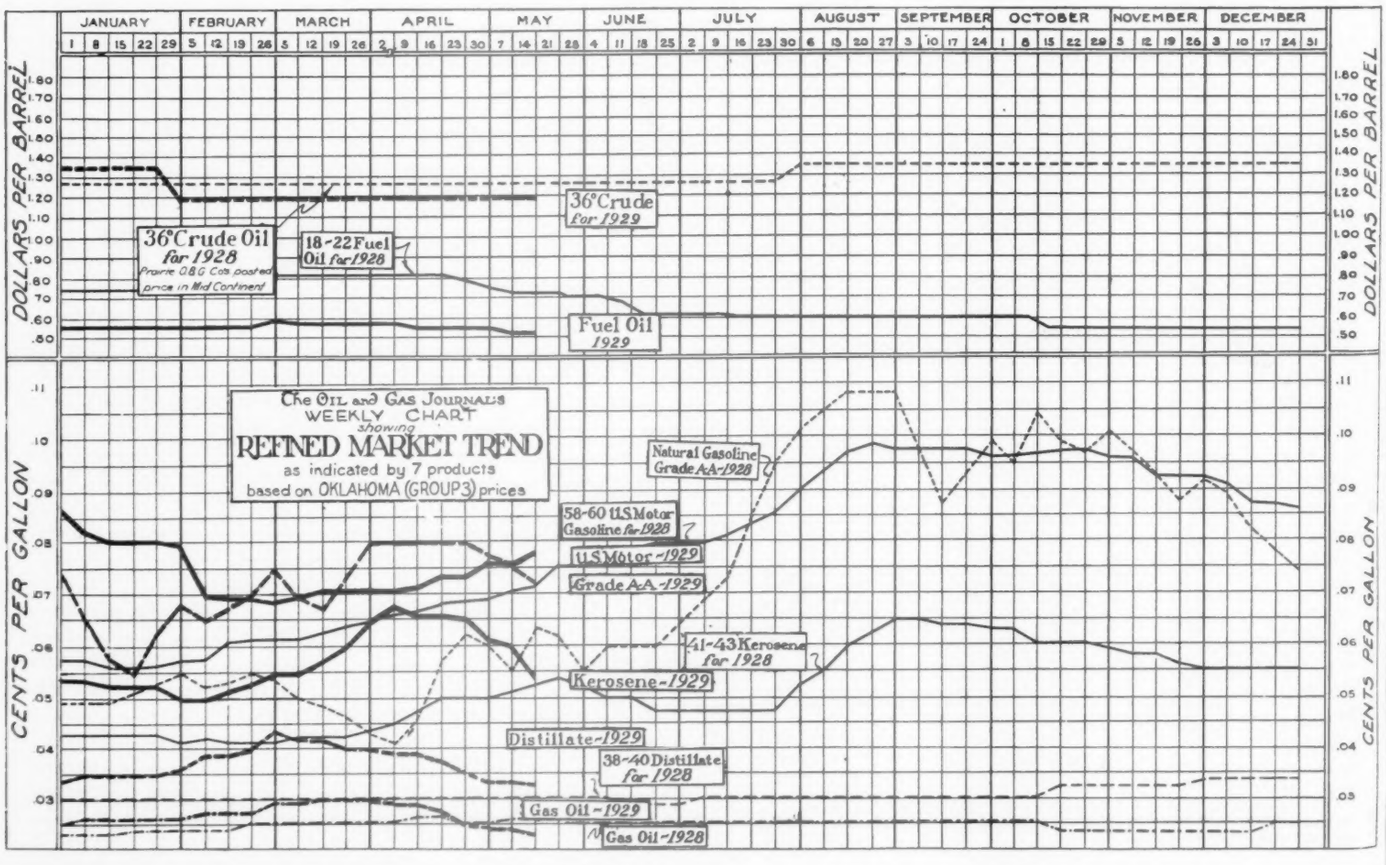

State Fixes 725,000 Bbls. as Limit

Oklahoma Corporation Commission Agrees to a Temporary Increase of Average Daily Crude Oil Production

By James McIntyre

Because there is a current demand for Oklahoma crude oil in excess of the permitted production of approximately 650,000 bbls. per day, the Oklahoma Corporation Commission on Monday, May 13, was asked to change the permitted production to 725,000 bbls. a day, and to follow its order with an investigation as to the demand for Oklahoma crude and upon the basis of the facts ascertained make such modification of the order as the commission shall find to be necessary to prevent overproduction of crude oil in the state. The recommendation of the petitioners was approved by the commission and the order for an increase in the production limit asked for was entered. It was decided that future hearings on the subject would be granted as occasion demanded.

The Commission's Order

Following is the text of the order of the Oklahoma Corporation Commission issued at the conclusion of the hearing Monday. The order is preceded by the findings of the commission which agree with the argument set forth in the petition of Umpire Collins representing the producers:

"It is therefore the order of the commission, premises considered, that from and after May 15, 1929, the production of crude oil within the State of Oklahoma, on account of the seasonal demand therefor, be and the same is hereby fixed and established at 725,000 bbls. per day.

"It is the further order of the commission, premises considered, that in case the production of crude oil within the State of Oklahoma during the effectiveness of this order, exceeds the limit of 725,000 bbls. per day as herein permitted, then such proration as may be necessary, in order to hold the production at said limit of 725,000 bbls. per day, shall be applied only to that area known and dealt with heretofore by the order of the commission, as the greater Seminole area, located in Seminole and Pottawatomie Counties, Oklahoma.

"It is the further order of the commission, that Order No. 4,650 and Order No. 4,592 be and they are hereby extended in full force and effect in so far as they are applicable with respect to the proration and limitation of production in what is known as the greater Seminole area, with the exception that the limit of production within the entire State of Oklahoma be and the same is hereby increased from 650,000 bbls. per day to 725,000 bbls. per day throughout the entire State.

"It is the further order of the commission, that full jurisdiction be hereby retained by the commission for the purpose of making, entering and promulgating such other rules, regulations and requirements as may be necessary from time to time in the interest of stabilization and conservation of crude oil and natural gas within the State of Oklahoma.

"It is the further order of the commission that the hearing set for May 13, 1929, upon the application of Ray M. Collins, umpire, filed on May 2, 1929, looking to the adoption of a stabilization and conservation order covering the entire State of Oklahoma, be and the same is hereby continued without date, to be heard at such time as may be hereafter fixed, upon the giving of reasonable notice to the operators as required by law."

The petition was presented as the result of a largely attended meeting of representatives of leading oil companies operating in Oklahoma held in Tulsa on Thursday, May 9.

The meeting had been called to discuss the question of petitioning the Corporation Commission for an extension until June 30 of the proration order which has been in effect since February and which placed a limit of 650,000 bbls. per day on the production of the state. The Commission's order expired on May 15. The Prairie Oil & Gas Co., the Sinclair Oil & Gas Co., the Producers & Refiners Corp. and Thomas B. Slick all objected to a continuance of the order on a basis of 650,000 bbls. and a substitute motion which had been prepared by W. N. Davis, of the Phillips Petroleum Co., after consultation with numerous interested oil executives and individual producers and which called for a 725,000-bbl. temporary production limit, was passed unanimously.

The Davis Substitute

Mr. Davis' substitute, which was in the form of a petition to the Oklahoma State Corporation Commission with Ray M. Collins, umpire and chairman of Thursday's meeting, as the petitioner, was as follows:

"As chairman of the meeting of the oil producers held at Tulsa today, I am requested to write you the consensus of opinion as developed in that meeting concerning conservation measures in the interest of the industry and the public.

"Overproduction of crude oil in the United States as a whole continues and, for that reason, we believe that the conservation program for the prevention of wasteful overproduction should continue and that Oklahoma should do its part. Effective prevention of overproduction in the country as a whole demands a certain amount of co-operation among the several states where flush production exists.

"For this reason, we urge that the Corporation Commission retain jurisdiction and exercise its powers for the protection of the natural resources of Oklahoma from waste until such time as all danger of overproduction has passed.

"But we respectfully submit that the program must be a flexible one. The consumption demand for petroleum is seasonal and the amount to be produced under any program should be adjusted to seasonal variations in order to maintain a proper equilibrium between supply and demand. No arbitrary limit upon production can properly be continued indefinitely without revision or modification. For the past several years the demand for petroleum has varied as between the low point in winter and the high point in summer from 15 to 20 per cent. That is to say that, in the country as a whole, the consumption demand is from 300,000 to 500,000 barrels per day greater at the high point of summer than at the low point in winter. This seasonal increase in the demand for crude is now asserting itself and, therefore, a production limit which may have been proper in February might, at this time, be unreasonably low.

"Evidence developed at this meeting indicates that the present demand for Oklahoma crude is now 725,000 barrels per day as contrasted with the 650,000 barrels per day fixed in the order of last February. Therefore, we recommend that the Corporation Commission at this time enter a tentative order fixing the production limit in the state of Oklahoma at 725,000 barrels per day and that immediately thereafter the Commission institute careful investigation as to the demand for Oklahoma crude and, upon the basis of the facts thus ascertained, make such modification of said order as the commission shall find to be necessary to prevent overproduction of Oklahoma crude oil. We further recommend that such investigations be made by the Commission upon its own initiative at intervals of 30 days to the end that a proper balance be maintained between supply and demand for Oklahoma crude and to harmonize the conservation program in Oklahoma justly and fairly with that of other states.

"The producers at this meeting pledge themselves to co-operate with the Corporation Commission in such a program, both in ascertaining the facts of the relation between supply and demand and in executing the orders that the commission may make based upon such facts."

Favored 650,000-bbl. Limit

W. C. Franklin, vice president of the Tidal Oil Co., and chairman of the Interior Regional Committee of the American Petroleum Institute's Committee on World Production and Consumption of Petroleum and its Products, was the first speaker. He strongly favored a continuance of the existing proration order limiting the production of the state to 650,000 bbls. per day by prorating Seminole and other large flush fields including Lovell, Allen and Oklahoma City, until July 1. He expressed the belief that a proration order would not be necessary after July 1. The present over-demand for crude was a seasonal one. In the territory where Oklahoma crude was being run to stills there was only a 14 per cent increase in gasoline consumption as compared with the same period last year but there is a 29 per cent increase in the quantity of crude being run to stills. A large part of the gasoline being manufactured is put into storage awaiting the summer demand. The present demand for crude does not represent the average demand for the year, Mr. Franklin said, and he believed that by July 1 conditions would be such that proration or curtailment of production would not be required. He strongly urged that Oklahoma remain in line with the other large producing divisions in the world wide effort to stabilize the oil business.

W. N. Davis agreed with the sentiments expressed by Mr. Franklin but he did not believe the Oklahoma Corporation Commission would grant an order on a basis as low as 650,000 bbls. a day when about 50,000 bbls. of oil is being taken out of storage to supply the crude demand and the state is actually producing about 675,000 bbls. a day. He proposed the substitute petition given above and which later was adopted.

C. C. Herndon, vice president of the Skelly Oil Co., backed up Mr. Franklin in his effort to keep Oklahoma at the forefront in the matter of crude curtailment and he made a motion to adopt the resolution which called for a continuance until July 1 of the 650,000-bbl. proration order on a statewide basis. R. M. Young, president of the Carter Oil Co., seconded the motion, and on the vote that followed 16 operators favored it and 4 voted aginst it, while four companies asked to be excused from voting.

Inasmuch as the Prairie Oil & Gas Co. and the Sinclair Oil & Gas Co., two of the four opposed to the 650,000-bbl. limit, represent about 25 per cent of the pro-

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LEADING CALIFORNIA OPERATORS TO GO AHEAD WITH CURTAILMENT

By L. P. Stockman

LOS ANGELES, Calif., May 14.—Although the lifting of curtailment measures in Oklahoma on May 15 will have an adverse moral effect on California curtailment and furnish some operators with a much needed alibi, it will not void the efforts of progressive operators to keep California production down more nearly to requirements. Some disappointment exists because of the apparent untimely action of Oklahoma operators and the feeling is rather general that the lifting of restrictions could have been postponed until a more opportune time in view of the difficulties being experienced in securing voluntary co-operative action among California producers.

—Underwood & Underwood.

F. C. van Deinse
Umpire in charge of the conservation movement in California.

It is safe to say that California production will be restricted for an indefinite period of time unless jeopardized by unwise action in other areas.

As a matter of fact crude oil production in California must be curtailed in order to prevent a distorted economic structure as the Pacific Coast territory cannot continue to absorb unlimited quantities of crude and refined oils indefinitely without building additional storage facilities.

If this becomes necessary price schedules must of necessity be revised.

Voluntary curtailment has not reduced state production to anywhere near the desired goal due to the completion of new wells in flush areas.

The next 30 days will witness the completion of numerous new wells at Santa Fe Springs and this group should cause an appreciable increase in production in as much as they are permitted to flow unrestrained for 10 days following completion before being beaned back.

It is quite probable, however, that state production will be reduced very substantially within the next 60 days as the new gas conservation law which has just been passed by the legislature will become operative within 30 days after being signed by Governor Young. A strict interpretation of this law would reduce state production more than 200,000 bbls. per day but it is not likely that any such drastic steps will be undertaken. This measure will, however, substantially reduce flush production of crude oil by forcing operators to eliminate any waste of natural gas.

Fractional Analyses of Natural Gas

Distillation Method Gives Accurate Check on Gasoline Content of Residue Gas from Natural Gasoline Plants

By Walter J. Podbielniak
Research Chemical Engineer

A very important application of the fractional distillation method of analysis is the analysis of the residue gases or "dry" gases from a gasoline plant to determine the amount of valuable gasoline hydrocarbons passing away from the plant; and thus to determine the efficiency of the plant or of the separate pieces of equipment, such as absorber or stabilizer. If such analyses show that the efficiency of equipment or plant is lower than it should be and that some of the valuable gasoline hydrocarbons lost may be recovered, suitable changes may be made in the plant and its operation until the final analyses of residue gases show the maximum practicable efficiency.

An apparatus and method of fractional distillation analysis for natural gas and gasoline have been developed by the writer and described in detail in the literature.[1] Its practical applications in the control of natural gasoline plants and in the refining of petroleum have also been discussed.

The present paper is devoted to a consideration of the special difficulties encountered in the analysis of very dry natural gases for gasoline content and the means used to successfully overcome them. Incidentally, a method is described for precooling gas samples before entering them in the fractionating column of the analytical apparatus, so as to save considerable time both in wet and dry gas analysis.

Plants Efficient

The modern gasoline plant is remarkably efficient in extracting gasoline from natural gas. It is usually a matter of surprise to those outside the industry to learn that the gas entering the plant may have only 1.0 per cent of valuable natural gasoline hydrocarbons (considered here as pentanes-and-heavier because this portion is recoverable in its entirety for gasoline) of which the plant will extract 90 per cent to 95 per cent or better, leaving only 0.1 per cent or less of gasoline in the residue gases from the plant. This high efficiency is made possible by designing the plant for the sharpest practicable separation of hydrocarbons of varying volatility from each other. Obviously, it follows that any useful analytical method for natural gas must at least equal the efficiency of the best gasoline plants in separation of hydrocarbons from each other, and it is of course most desirable that the analytical method surpass the gasoline plant as much as possible in this separation efficiency.

The demand on the analytical method is unusually severe in the case of dry gas analysis, where as little as 0.1 per cent of pentanes-and-heavier must be fractionated sharply from the rest of the gas and determined with considerable accuracy. In other words, whereas a wet gas may contain 2.0 per cent of pentanes-and-heavier, this same gas stripped of its gasoline content will only contain 0.1 per cent pentanes-and-heavier or one-twentieth as much as before and the analytical method must now be twenty times as accurate as before for the same size of gas sample.

For the purpose of this discussion it will be assumed that a dry gas is one which has 0.2 per cent pentanes-and-heavier or less, corresponding to 0.083 GPM (pentanes-and-heavier). The question of practical importance is how accurately do we wish to determine this percentage to give us valuable information for plant control and other purposes. Ordinarily, a gasoline plant operator will not care for an accuracy in the determination of pentanes-and-heavier, greater than within plus or minus 0.03 per cent (that is, within about plus or minus 0.01 GPM), on the dry gas from his plant; in fact this accuracy is greater than necessary for almost all practical work.

It is of course impossible for the method of analysis to determine 0.1 per cent of a fraction as accurately as 2.0 per cent on the same size gas sample. It is possible but not very practical to increase the accuracy of the method by running at lower pressures. The simplest practical alternative is to take a sufficiently large sample of dry gas to compensate for the small percentage of the important fraction to be determined.

In the fractional distillation method as described[1], a gas sample is passed through a fractionating column, of which the reflux is cooled almost to liquid air temperature and some of the methane in the gas and all of the ethane-and-lighter is condensed to a liquid which remains in the distilling bulb of the column. The process is a continuous one; the gas sample is passed into the column and any non-condensible gas (air, oxygen, nitrogen and carbon monoxide) and most of the methane, simultaneously vented from the top of the column. The size of the gas sample taken depends entirely on the accuracy required, and on the percentage of pentanes-and-heavier in the sample.

A certain minimum amount of pentanes-and-heavier must be condensed in the column at the end of this continuous sampling process in order that it may be properly refluxed and efficiently fractionated in the column and accurately measured either as vapor or as liquid. Since the size of the gas sample may be made as large as desired and since all of the pentanes-and-heavier in the sample is concentrated in the distilling bulb of the column during the entry of the gas sample, even the very dryest gas sample may be analyzed with the same accuracy (referred to the percentage of the pentanes-and-heavier fraction) as a comparatively wet gas, provided only the size of the gas sample is large enough to compensate for the "dryness" of the gas. The considerations involved in fixing the approximate size of the gas sample for a required accuracy may be presented as follows:

Let us assume that there should be at least 0.75 cc. of pentanes-and-heavier liquid in the fractionating column of the apparatus to be easily fractionated from the butanes-and-lighter fraction simultaneously condensed, with an accuracy within about plus or minus 0.06 per cent of 0.75 cc. or 0.05 cc. This assumption is on the conservative side to allow for varying operation of the apparatus in the hands of operators of varying experience and skill. 0.75 cc. of pentanes-and-heavier liquid are equivalent to 138 cc. in the gas form, and the size of the gas sample must be chosen so that we shall have approximately this many cc. of pentanes-and-heavier no matter how dry the gas. If, for instance, we expect the gas to be approximately 0.2 per cent pentanes-and-heavier, we must take 138 cc./0.2 per cent or about 69,000cc. or 2.4 cubic feet of gas sample for analysis.

For a gas containing approximately only 0.1 per cent pentanes-and-heavier, we would double this volume of gas sample and make it about 138,000 cc. or 4.8 cubic feet. The percentages of pentanes-and-heavier would thus be accurate within about plus or minus 0.06%x0.2% = 0.012% and 0.06%x0.10% = 0.006% respectively. Check results on the same gas sample would then be expected not to deviate more than 0.20 per cent to 0.22 per cent and 0.10 per cent to 0.11 per cent (corresponding to 0.083 GPM to 0.091 GPM, and 0.041 GPM to 0.045 GPM), which is considerably more accurate than required, and provides a margin of safety.

Size of Sample

It is to be noted that the above discussion concerns itself entirely with the analysis of dry natural gas samples containing less than about 0.2 per cent pentanes-and-heavier; more accurate results are of course obtainable in the analysis of gases higher in gasoline content and proportionately less sample need be taken for analysis. It is also possible for most skilled operators of the apparatus to get required accuracy with smaller gas samples than would be calculated by the above assumptions. A general rule, however, in case of doubt, is to increase the size of the gas sample.

The larger the gas sample the longer it takes to introduce it properly into the fractionating column of the apparatus; in the case of large gas samples it therefore becomes necessary to use a modified method of introducing the gas sample which makes possible the introduction of even very large gas volumes into the column in a comparatively short time without in any way affecting the accuracy of the determination. Diagram No. 1 is a hookup of the apparatus and connections found most successful for the rapid entry of gas sample, whether wet or dry, but especially for dry gases, into the fractionating column, without flooding the column and without loss of the heavier hydrocarbons due to undue boiling of liquid in the distilling bulb of the column.[2]

The gas sample container and other

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[1] "An Improved Apparatus for the Fractional Distillation Analysis of Natural Gas and Gasoline and Similar Gaseous and Volatile Liquid Mixtures" by Walter J. Podbielniak, published in The Oil and Gas Journal, January 17, 1929. "Fractional Distillation Analysis—Its Practical Applications in the Manufacture of Natural Gasoline and in the Refining of Petroleum." by Walter J. Podbielniak, published in the Refiner and Natural Gasoline Manufacturer, March, 1929. "Practical Application of Gas and Gasoline Analysis as Applied to Plant Control" by J. C. Burks, of the O. C. Field Gasoline Co., published in the Petroleum World, September, 1928. "Use of Gas and Gasoline Analysis in the Practical Operation of a Gasoline Plant" by the Gas Analysis Committee of the California Natural Gasoline Association, published in the Petroleum World, January, 1929.

[2] This method of introducing large gas samples was developed in the Lomita Gasoline Company—J. A. Campbell laboratory, by Henry Wade and W. B. Davis.

WILLIAM B. WAY IS CHOSEN GENERAL MANAGER OF PETROLEUM EXPOSITION

William B. Way, of Pittsburgh, former secretary of the Natural Gas Association of America and of Natural Gas Supply Men, Inc., has been selected as general manger of the International Petroleum Exposition and Congress which will be held in Tulsa from October 5 to 12, inclusive. The selection was made by the executive committee appointed by William G. Skelly, president of the exposition and composed of Arch W. Leonard, chairman; J. Burr Gibbons, who was general manager of the exposition during the past two years and who was unable, owing to press of his own business, to accept the position again this year; D. D. Wertzberger, Alf G. Heggem, and Frank J. Hinderliter. Mr. Way will move to Tulsa within the very near future and will make that city his home.

Mr. Way was born in New Brunswick, New Jersey, July 18, 1885. His family moved to Pittsburgh when Bill was five years old and he was educated in the grade and high schools in Pittsburgh. He is proud of the fact he sold newspapers in Pittsburgh in order to supply himself with money to satisfy many of the wants of the boy of that age. After looking after the many heavy responsibilities of several jobs as office boy he finally decided he needed more room in which to move around so in 1905 he became a traveling salesman for the Ludlow Valve Manufacturing Co. of Troy, New York. His work dealt mostly with handling oil and gas field equipment and he became familiar with equipment and supplies for oil and gas field work.

Mr. Way was made manager of the Pittsburgh office of the company. During this time the Natural Gas Association of America became quite active and Mr. Way was one of the leaders in the Natural Gas Supply Men's Association, holding the office of president of that organization and later secretary when the name was changed to Natural Gas Supply Men, Inc.

In 1919 Mr. Way was chosen as secretary and treasurer of the Natural Gas Association of America. He successfully arranged and handled all of the succeeding conventions of that organization and the exhibits of Natural Gas Supply Men, Inc., until 1926 when he became associated with the Witt-Humphrey Steel Co. in Greensburg, Pa.

Few men enjoy a wider acquaintanceship among supply and equipment men than does Bill Way and his extensive experience in the handling of conventions

William B. Way

and large exhibits of equipment and supplies peculiarly fits him for the position of general manager of the International Petroleum Exposition and Congress. His policy in the past has been and he states it will continue to be in connection with his work at the exposition in Tulsa to give every exhibitor a good run for his money, with active co-operation to the end that every exhibitor will reap the utmost benefit from the display of his equipment.

Will Build New Gas Line in Louisiana

Arkansas Natural and Dixie Gulf Arrange for Construction of 20-Inch Line from Shreveport to Monroe and Richland

By D. H. Bancroft

SHREVEPORT, La., May 13.—Consummation of negotiations which began a year ago, and which have expanded since to include other details not at that time proposed, between Arkansas Natural Gas Corp. and the Dixie-Gulf Gas Co., a Moody-Seagraves organization, for another pipe line from Shreveport to the Monroe and Richland gas fields, was announced by D. W. Harris, vice president and general manager of the former company, here on his return today from New York where the final major details of the agreement were agreed upon. Construction of the line, approximately 100 miles of 20-inch, will begin as early as possible and as all the preliminary work of surveys, rights of way, etc., and even a few miles of the line, already have been completed, this will be sooner than is usually the case. Completion is scheduled for about October 1 at which time Arkansas Natural Gas Corp.'s present contract with the Magnolia Pipe Line Co., already operating a line of similar proportions, will expire.

Upon completion of the new line it will be operated on a program which amounts, practically, to operation by the Arkansas Natural for the joint account of itself and the Dixie-Gulf, the latter selling the Arkansas gas from its Richland and Monroe wells and buying it back again at the Dixie-Gulf's Waskom compressor station, the now northern end of its 22-inch line to Houston and the western terminal of the new line. However, the Arkansas Natural has made contracts with other producers for gas in addition to production from its own wells in the two east Louisiana fields.

A year or more ago the Dixie-Gulf company proposed a 20-inch line from Waskom to the Monroe and Richland areas and had progressed to the point where survey was run and rights of way purchased the entire length of the line and several miles of a twin 12-inch line built across the LaFourche swamp just west of the Richland Field. Not long afterward the Arkansas Natural appeared with plans for a similar line but both were stopped when negotiations between the two were begun in New York in May, 1928.

After reciting that an unspecified amount of gas will be sold to the Cities Service Distributing Co., the Arkansas Natural's retail agency, to bolster the declining supply derived from Panola, Waskom, Elm Grove and Webster sources, the announcement from the Arkansas Natural's offices here states:

"Gas purchase contracts have been entered into by the Arkansas Natural Gas Corp. with the large gas producing companies in the Monroe and Richland Fields, being the Palmer Corp., Louisiana Gas & Fuel Co., Hope Construction Co., International Gas Co., Southern Carbon Co., United Carbon, Natural Gas Producing Co. of Louisiana, Industrial Gas Co. and Dixie-Gulf Gas Co., which, with the production owned by the Arkansas Natural Gas Corp., will make available for its use gas from 250,000 acres of proven territory in the Monroe and Richland Fields.

"Announcement is also made of the purchase by the Arkansas Natural Gas Corp. from the Industrial Gas Co. of the 16-inch line constructed by the Hunter interests and the 12-inch and 14-inch line constructed by the Latex Construction Co. from the Monroe Field to El Dorado and Camden, Ark., with all their gas sales contracts in that area, including the contract with the International Paper Co., for its pulp mill south of Camden.

"A contract also was entered into with the Industrial Gas Co. to purchase gas

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Gulf Coast Fields Staging a Comeback

Production in April Over 33,000 Bbls. More Than in Same Month Last Year. Gravity Is Higher Also

By Neil Williams

HOUSTON, Tex., May 13.—Such a decidedly upward trend in the production of the Gulf Coast during the first four months of 1929 has been indicated that this division soon may take a conspicuous place among offenders in the present overproduction situation. Not generally looked upon as an important crude factor in the industry as a whole, probably because the oil in the past has been rated only as heavy and of concern only as a lubricating stock and because the total daily output possibly is small in comparison to a few of the late prolific fields and areas, yet this district is boosting its daily output to a point near the peak of a few years ago.

This might not be significant except that as recently as two years ago with the decline of such famous prolific pools as Spindletop, Humble, Hull and Goose Creek and with the coastal territory considered exhausted so far as there being any chances of finding any new such fields it was thought that this division was a thing of past history. Now, with the finding of a new generation of fields and with the rejuvenation of the old domes with new producing areas and horizons, and with more untested and undeveloped salt domes and prospects, all possible fields, discovered during the past two years than there were producing fields on the coast before then it is likely this area at this time is only beginning to tap its potential oil reserve.

The extent to which coastal production is increasing is indicated in a comparison of the daily average output of the first quarter of 1929 with that of the preceding three months. During the last quarter of 1928 the coast averaged 130,536 bbls. but during the three months opening 1929 that figure was raised to 143,225 bbls., an increase of 12,688 bbls.

April Increase Notable

During April of this year the increase has been still more noticeable, the daily average for the month up to April 27 being 155,107 bbls. For the week ending April 27 the daily average was 158,566 bbls., which in itself was 33,145 bbls. greater than during the corresponding week of the previous year, and greater than at any time since February of 1927. The peak production of the coast was approximately 190,000 bbls., which was attained for a few months during 1926 with the development of the new deep sands on the southwest of Spindletop. Now, production, unless curtailed by restrictions other than natural limitations already heeded voluntarily by most companies, promises to aim at that peak and possibly go far beyond it.

Although no steps for a plan of curtailment of the steadily climbing production have been taken in the Gulf Coast, voluntary holding in of the output in several of the fields has been done in instances where the fields are controlled by one company or jointly by a group. Were it not for this the coastal production even at this time might be nearer its peak by as much as 20,000 bbls. than it is.

The fact that most of the new fields and salt domes are controlled either singly or jointly by the major companies, tends to stabilize the Gulf Coast crude situation in the face of the comparatively big increase, and this, with the natural limitations of salt dome development in the way of radical irregularities of sands and uncertainties of production, would seem to place a natural restraint on any overplay or overproduction in coastal fields.

Consistent Development

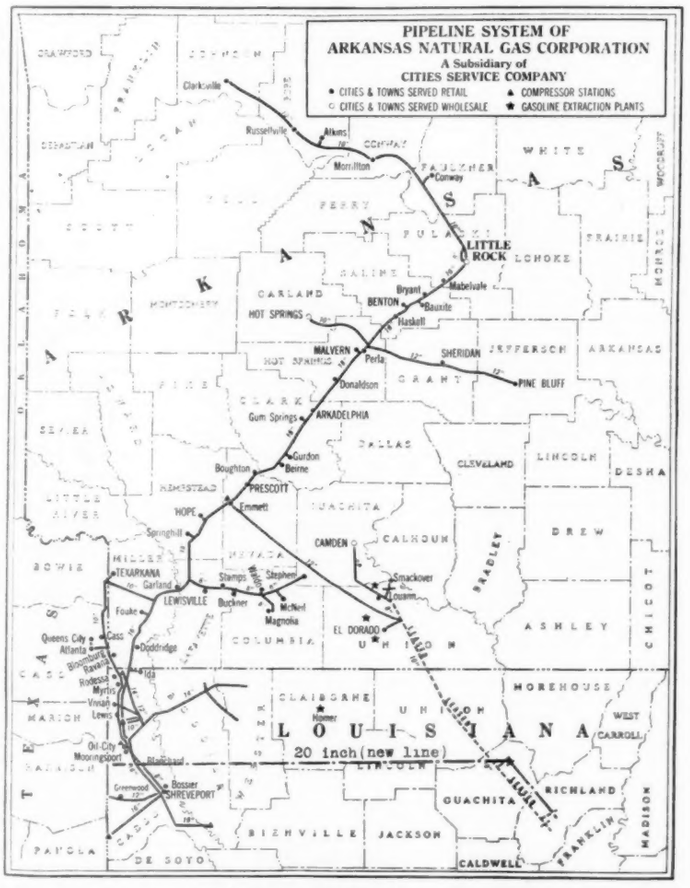
On the other hand, drilling requirements have resulted in considerable, although consistent, development not only in many of the older cut up areas but also on the controlled domes which has put new prolific fields into the production columns and boosted old fields into front rank either for the first time or for a comeback. Thus, such areas as DeWalt, the new deep sands on the east and on the southwest flanks of Barbers Hill, the deep sand on the south of Humble, extensions of Pierce Junction, Hackberry, Raccoon Bend, Clay Creek and others have been felt in the production totals. The latter two named fields perhaps have not been given prominence generally as their production has been kept pinched in to a small part of their already developed potential output but either of these fields if opened might make more than any of the other fields named.

That the greatly increased production of Gulf Coast crude will have very little serious effect on the local market for the present is the contention of some who keep in touch with the situation. The transition of the bulk of the Coastal production from Grade A to Grade B with the latter's smaller lubricating stock content together with the generally increasing demand for lub probably has resulted in a situation in which a much greater amount of coastal oil is required.

Tightness of Market

The tightness of the present market on the coast would bear that out as the supply of strictly Gulf Coast crude is not overly abundant and in many instances substantial premiums are being paid.

(Continued on Page 74)



Map showing Arkansas Louisiana Pipe Line Co. system with approximate route of new Waskom-Monroe-Richland 20-inch line.

Proration Successful in Winkler Area

Record Shows It Has Accomplished Two Primary Purposes During 10 Months of Trial. Difficulties Encountered

FORT WORTH, Tex., May 13.—Although the path of Winkler County's proration plan has been beset with its full share of internal strife, records show it has accomplished its two primary purposes during the first 10 months of its life. Primarily the plan was instituted to conserve the pool, thereby increasing the ultimate yield and of course in turn throttle production that was soaring above 300,000 bbls. daily.

The most accurate yardstick sponsors use to measure the success of the Hendricks Pool plan from a national standpoint is a comparative table of production showing the actual production of Winkler County in relation to the allowed production.

Reed Alsobrook, umpire in Winkler County, recently compiled such a table showing the production since May 5, 1928, the beginning of proration, to March 1, 1929. During those 10 months Winkler County was allowed to produce 49,150,000 bbls. under the orders of the Texas Railroad Commission, under whose supervision proration in Texas is carried on. The actual production for the same period is 48,825,294 bbls. leaving a net shortage of 324,706 bbls. under the plan.

Almost from the beginning of proration the Hendricks Pool has produced under its allowed production. This shortage is continuing to pile up despite the fractures in the plan due to some companies operating leases under a court injunction restraining the commission from enforcing the plan.

A great deal of the accrued gross shortage shown in the accompanying table comes from leases that cannot produce all of their allowed quota. Most of these leases are edge properties and the wells never had a high potential production. Some of the shortage is due to some of the companies voluntarily producing less than allowed on some of their leases. This is due to the fact some wells are pinched below the proration requirements because of the water situation on the lease. However, these cases are exceptional.

Several leases combined made 1,096,379 bbls. over their allowed production. On the other hand several other leases combined produced 1,421,085 bbls. less than they were allowed under the plan leaving a net shortage of 324,706 bbls. It is true that a large percentage of the gross shortage is traceable to leases that cannot produce all of the oil the unit is entitled to produce either because the wells were never big wells or because water encroachment has cut down the potential production of the lease.

On the other hand the gross overage is being cut down steadily despite the fact that several leases are producing far more than they are allowed under the plan. The reason for the steady reduction of the gross overage is because several companies are paying back the overage accumulated from flush wells.

Regardless of the inner troubles of the plan the fact remains that Winkler County has produced almost 325,000 bbls. less than it was entitled to. That is the figure to take into account when considering whether Winkler County has done its share towards proration. The achievement is considered more remarkable because when the plan was launched a great many were skeptical about its success. Most of the companies favored it (a plan calling for an allowed production of 150,000 bbls. daily, 50 per cent to be allocated on the basis of acreage and the remaining 50 per cent of the outlet to be allocated on the basis of potential production) because some sort of curtailment was necessary. It was too late to attempt a shut-down plan and the alternative was to throttle production.

Even the transient citizens of Wink were incensed. H. N. Pardee, now with The Texas Company, was the first umpire and he was assisted by Reed Alsobrook, the present umpire. Soon after his arrival Mr. Alsobrook learned that his life was in peril if many barbers learned his identity. Going into a barber shop for a shave about the time order was being brought out of chaos, the subject of conservation arose in the mind of the well-known linquist and razor artist. Without any preliminary remarks the barber expressed the sentiments for Wink when he said: "A couple of blankety-blank-blanks are comin' here to starve us to death." Six month later the barbers changed their minds and are great moral supporters of the plan. It has not only lengthened the life of the pool, helped a weak crude market and increased the ultimate recovery of Hendricks, but has added several months to their stay in the "biggest oil town in the desert."

When the plan was first started it was not only necessary for the umpire to have a definite course mapped out and possess a knowledge of the field, but he also had to be a diplomat. Without a whole lot of diplomacy many little storms in the field could have easily swept on to battle in the advisory committee room.

Both Mr. Alsobrook and Mr. Pardee are given a great of credit by the operators for the success of the plan. In the beginning Mr. Alsobrook dvised a system of records that has enabled the umpire to record his every official act and keep a complete check on every well.

Co-operation has been the key to the success of the plan and still is. Today companies not in harmony with the plan turn in their production figures daily as promptly as they did when producing their leases under proration and co-operate with the umpire in other matters.

Operation of the plan entails a great deal of detail work. The most important piece of that work is the bi-monthly report of all wells made by Mr. Alsobrook and his corps of assistants. This report fills three single spaced sheets 17 by 28 inches. It gives the lease owners a description of the lease and unit number. Each 40 acres in a section is divided into 40-acre units. In addition each well is listed, its potential production, the amount the well is entitled to produce for unit allowance and the amount it is allotted for potential production.

Compilation of these statements invariably results in a good-natured battle twice a month in the proration office. Some of the field superintendents discover one of their wells has been cut in potential production more than he thinks it should be and the battle of percentages is on. The troubles have always been ironed out to the satisfaction of every one concerned.

This time-consuming part of the work has been partly eliminated from the umpire's duties by the recent appointment of a field committee by the operators. This committee is comprised of superintendents in daily contact with field developments. When an operator desires not to have his well gauged for proration purposes the committee studies the history of the well and makes an estimate of its potential.

In the past the percentage of reduction was entirely up to the umpire who not only had the leaseowner to satisfy but also the offset owners as well. This sometimes was a difficult task. Under the new arrangement this grief is eliminated so far as the umpire is concerned and is preventing the opening of many wells and lessening the danger of more serious water encroachment in them.

A few days before the first and fifteenth of each month the gauging period starts. In order to expedite gauging the umpire asks for help from the various companies because his staff can gauge only a limited number of wells during four days. Therefore the farm boss on A lease goes over to help his neighbor on B lease gauge his wells. In this manner a representative of the offset leaseowner is present when the wells are not gauged by a disinterested person.

No shut-in wells are gauged. When everything is in readiness a third party

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STATEMENT SHOWING (BY COMPANIES) THE TOTAL OIL PRODUCED IN HENDRICKS POOL, WINKLER COUNTY, TEXAS, UNDER PRORATION PLAN

(May 5, 1928 to March 1, 1929), as compared against the total "Outlet"; also showing the accrued gross shortage and overage to date:

Company—	Only 25% of total (tested) potentials (probably true)	Total allowable prod. under plan	Total actual prod. under plan	Accrued gross shortage	Accrued gross overage
Amerada Pet. Corp.	207,399	165,333	161,149	4,184	.....
American Maracaibo	11,532	8,206	9,516	.....	*1,310
Atlantic Oil Prod. Co.	21,511,313	6,279,993	6,029,299	250,694	.....
Bankers Prod. Corp.	137,379	23,041	66,438	.....	43,397
California Company	1,086,818	509,366	504,034	5,332	.....
Cranfill & Reynolds	4,714,504	1,423,607	1,539,253	.....	*115,646
Culbertson Brothers	9,323	5,606	6,425	.....	*819
Eastland Oil Co.	69,189	102,060	94,908	7,152	.....
Empire Oil & Fuel Co.	60,734	55,165	62,511	.....	*7,346
Gulf Production Co.	17,419,954	4,148,570	4,188,121	.....	*39,551
Humble Oil & Ref. Co.	7,788,954	3,514,929	3,377,888	137,041	.....
Independent Oil & Gas Co.	3,294,780	1,778,690	1,338,233	440,457	.....
Magnolia Petroleum Co.	196,910	383,660	339,568	44,092	.....
Marland Production Co.	2,476,573	837,603	810,398	27,205	.....
May Oil Corp.	.....	611	1,108	.....	*497
Mining & Engineering Corp.	64,969	21,271	30,493	.....	*9,222
Murchison & Cranfill	1,212,898	568,192	1,061,369	.....	493,177
Murchison & Lee	444,557	92,948	185,610	.....	92,662
Pickerell & Cranfill	.....	.....	6,376	.....	*6,376
Prairie Oil & Gas Co.	4,987,008	998,613	1,021,617	.....	*23,004
Pure Oil Co.	15,611,992	4,245,881	4,335,039	.....	89,158
Republic Producing Co.	5,147,479	1,700,353	1,773,578	.....	73,225
Richardson & Kelsey	39,152	66,083	87,478	.....	21,395
Shell Petroleum Corp.	16,120,834	4,818,084	4,782,987	35,097	.....
Shell Pet. and The Texas Co.	15,662,799	4,250,964	4,232,852	18,112	.....
Simms Oil Co.	.....	.....	440	.....	440
Skelly Oil Co.	13,968,637	2,362,155	2,400,396	.....	*38,241
Southern Crude Oil Pur. Co.	20,464,483	9,568,971	9,331,433	237,538	.....
Texon Oil & Land Co.	1,644,976	932,503	950,105	.....	17,602
Warner-Quinlan Co.	13,650	6,786	12,175	.....	*5,389
L. H. Wentz Oil Co.	21,664	20,287	22,825	.....	2,538
Winkler Oil Prod. Corp.	128,677	46,288	61,672	.....	*15,384
Undeveloped	.....	214,181	.....	214,181	.....
Grand totals	154,519,237	49,150,000	48,825,294	1,421,085	1,096,379

	Bbls.
Grand total outlet to date	49,150,000
Grand total production to date	48,825,294
Net plant shortage to date	324,706
Grand gross shortage	1,421,085
Grand gross overage	1,096,379
Net plan shortage to date	324,706

*Entitled to some credit on acreage allowance on wells brought in during mid-period.

R. ALSOBROOK, Umpire.

NEW ORLEANS FAVORED IF ANOTHER NATURAL GAS CONVENTION IS HELD

By Andrew M. Rowley

Looking back over the annual convention of the Natural Gas Department of the American Gas Association, which closed in Kansas City last Thursday, one is impressed by the fact problems relating to every phase of the natural gas business were discussed by persons who have made an especial study of these subjects. Such discussions, supplemented by the open forum session at which a number of subjects were presented for general discussion, cannot help but engender new ideas in the minds of those engaged in the production, transportation and distribution of natural gas and in the servicing of domestic and industrial customers with this fuel.

It is through such an exchange of ideas that real progress is made in solving the many problems confronting every department of the natural gas industry and therein lies the benefit of such conventions.

The main technical and research committee of the natural gas department is conducting a work which is expected to result in a vast saving both in money and natural gas to the entire industry. The reports of this committee, together with an outline of future work to be done, was of especial interest to the different natural gas companies represented at the convention. The work being done by this committee was described in the May 9 issue of The Oil and Gas Journal in connection with the report of the convention then being held.

Pending the report to be made at the annual convention of the American Gas Association at Atlantic City next October of the special committee appointed last week to consider the matter of future conventions of the Natural Gas Department, additional interest is being attracted to the Southwest Division of the Natural Gas Department, which, in my opinion, will become the recognized natural gas association for the entire country should it be decided to hold the annual meetings of the natural gas men at the same time and place as the annual convention of the American Gas Association. This division is an especially active organization and many of the leaders in the Natural Gas Department are officers and leaders in this division.

Problems of the natural gas industry in the West and Southwest, as has been pointed out many times before, differ to a great extent from those of the natural gas companies operating in the eastern section of this country. In the East the supply of natural gas is being depleted fairly rapidly and the companies engaged in the natural gas business there are being forced to augment their supply of this fuel with manufactured gas. In the

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George D. Locke Knows He Likes Oil

He Ought To; He Was Lawyer, Banker, Railroad President 'n Everything Before Settling Down as Barnsdall Vice President

By Thomas F. Smiley

Life seems to have been just one thing after another for George D. Locke. A survey made before going to press showed there were still a few vocations he had not taken a shy at, including those of undertaker and embalmer, tightrope walker and short-order restaurateur. But there's lots of time yet; he's not an old man.

Mr. Locke started in to be a lawyer. He was a justice of the peace, banker, school director, railroad president. He took a whirl at developing an anthracite property and while he was in the whirling mood he took one at developing a timber tract. He directed the management of a group of public utility corporations. He served as mayor. He—let's see now, wasn't there something else? Oh, yes, yes, oil. He's vice president of Barnsdall Refineries, Inc., in charge of sales. In fact, that's what he's been for some 12 years, and he seems to like the job so well that there's probably very little likelihood of his diversifying his career any further.

For his birthplace Mr. Locke selected Jerseyville, Ill. Big cities do well enough for the activities of later life, but when it comes to a native town Mr. Locke likes something unobtrusive, chaste, self-contained, with just a dash of roguishness to keep it from being downright dull. Jerseyville met the requirements. True in the last census it had a teeming population of 3,839, but it was smaller and less inclined to be bumptious back in 1874, when on October 3 Mr. Locke's name was added to its personnel.

He'd Have Made a Good Lawyer, Too

Following a non-stop flight through the grade and high schools of Jerseyville young George entered the law office of State Senator T. S. Chapman. Senator Chapman was more than a preceptor. George's father, James A. Locke, had died when the boy was 6, leaving what in those days was accounted a large estate. Senator Chapman served as legal counsel and general advisor for Mrs. Locke. To young George he was virtually in loco parentis. (N. B. A fellow's got to ring in something like that once in a while or the customers think he doesn't know much.)

George put in two years studying Blackstone, torts and everything, but at the end of the two years he had decided he didn't want to be a lawyer. Senator Chapman told him the time hadn't been wasted anyway. Knowledge of law was a good thing for anybody, the senator said. It gave you an analytical mind and helped you to keep designing fellow creatures from putting anything over on you.

So George adopted that view of it. That is to say, he took the position that the legal training he had received was an asset but that he didn't care for any more of it; just as one is glad to have had the measles, whooping cough, chickenpox and mumps and is quite satisfied to let it go at that.

"Well," suggested the senator, "suppose we buy the Jerseyville Electric Light, Gas and Power Co."

So They Bought It

"Fine," was the response, or words to that effect. And so they bought it. Being now 21, George had come into possession of his share of the estate left by his father. This gave him the capital needed for the excursion into the public utility field. He was made secretary and general manager. Senator Chapman was president. They ran the company till 1900, when they sold it. In those 5 years the younger man acquired an intimate knowledge of public utility operations that he found extremely useful later on.

Before going further it should be mentioned that while studying law and having just obtained his majority, George was elected a justice of the peace. In this judicial office he scored one of the triumphs of his career. Dr. Eastman, an osteopath, was working up such a big practice in Jerseyville that the medical doctors decided something ought to be done about it. Dr. Eastman was giving relief to patients all right, but the regular practitioners talked weightily about the majesty of the law and had the osteopath arrested on the charge of practicing medicine without a license.

But he wasn't practicing medicine with or without a license, Dr. Eastman countered. Medicine was the one thing above all others in this world that he wanted absolutely nothing to do with.

Squire Locke, before whom the warrant had been sworn out, made a deep dive into his law books and fished out a statute to the effect that anyone who "treats, operates on or prescribes for the physical ailments of any person is practicing medicine within the meaning of this act" and therefore must obtain a license from the state board of health.

Law Is Law, You Know

Now the squire liked Dr. Eastman personally. He suspected, as a matter of fact, that the case against the osteopath was inspired by jealousy. However, law is law, and he handed down a decision that Dr. Eastman indeed was violating a statute of the sovereign commonwealth of Illinois.

Dr. Eastman carried his fight to the state supreme court, which upheld the finding of Squire Locke. Of course the young magistrate was elated, but he did not look upon this victory as a reason for remaining in the law. On the contrary, it seems to have made him feel that he'd best get out while he had a good score.

The Charlie Birch case was another in which the squire disclosed judicial qualities of high order. If Charlie Birch ever had done any useful work in his 30 or so years of life, he carefully had concealed the fact. He did like to go hunting. One day when he was about to start out with his gun he decided he needed a dog. One was tied in the cellar of a house in the neighborhood. Charlie slipped into the cellar and untied the dog, which accompanied him on his trip into the woods. The dark deed was discovered and the prosecuting attorney of Jersey County was making out a complaint before Squire Locke, charging Birch with a felony, when the squire pointed out that as the dog was not worth $15 the theft did not constitute a felony. Furthermore, Squire Locke, who knew that Birch's petty derelictions had won for him the reputation of being a "damned nuisance," was seized with a brilliant idea.

And This Is What It Was

"Make the charge burglary," suggested the squire.

This was done, and Charlie, with visions of a ball and chain and a striped suit floating before his terrified gaze, was brought into the august presence of Squire Locke, before whom he pleaded guilty.

"I'll have to bind you over to the grand jury under $1,000 bond," quoth the court sternly, "but I'll let you have 24 hours freedom in which to arrange your bond."

Charlie, pale of face and thoroughly scared, left the courtroom and forthwith proceeded to fill the space between him and Jerseyville with distance. Jerseyville knew him no more. Charlie had as much chance of getting anybody to post $1,000 bond for him as a Louisiana mosquito would have of drilling to the Wilcox. And Squire Locke had been perfectly cognizant of that when he gave Charlie 24 hours liberty.

Seven years later Mr. Locke was walking in Spring Street, Los Angeles, when his attention was attracted by a seedy individual holding in his arms two young dogs which he was offering to sell to passersby. It was Charlie Birch, who in his flight from Jerseyville had kept going till the Pacific ocean stopped him. Recognition by the two men was simultaneous.

"Hullo, George, ain't seen you fer a hell of a while," was the cordial greeting from the dog vender. "How are you? Want to buy a dog?"

Oh, Well, Why Dig Up the Dead Past?

Mr. Locke eyed the pups in Charlie's arms and a suspicion flashed across his mind as he recalled how a dog had figured in the incident which prompted Charlie to have his name removed from the Jerseyville city directory. But he kept his thoughts to himself, chatted in friendly fashion for a few minutes, lent Charlie (in perpetuity) $2 and went on.

Following the sale of the Jerseyville Electric Light, Gas and Power Co. Mr. Locke bought a half interest in a private bank operated by Senator Chapman. The banking firm thereafter was Chapman & Locke. In 1903 the institution was reorganized as a state bank and Mr. Locke sold his half interest to his partner.

In addition to his other activities in Jerseyville up to this time Mr. Locke had found time to serve two terms as mayor, filling this office from 1901 to 1905 and extracting large quantities of fun out of it. He had served also as a member of the board of education.

Coal land east of Fort Smith, Ark., next occupied Mr. Locke's attention. He organized the Arkansas Anthracite Association and was made its president. The headquarters of the anthracite company were in St. Louis, Mo., and Mr. Locke resided in that city from 1905 to 1909. The company started on details preliminary to development of anthracite property. The help of a group of bankers was enlisted in a project to construct a railroad from Fort Smith to Memphis, Tenn. Such a road, it was believed, not only would afford an outlet for the hard coal which it was planned to mine, but would have a profitable general freight and passenger business.

Then Came the Earthquake

Then came the San Francisco earthquake. Unprecedented demands upon the banks by insurance companies involved in the disaster made it impossible for them to provide capital for small railroad enterprises. Mr. Locke had expended a large amount of money in connection with the anthracite and railroad projects and now when he had expected to reap his reward the thieving hand of fate robbed him. He tried to nurse the languishing promotions back to health. Things had begun to look brighter, too, when along came the panic of 1907 which soon had the railroad and anthracite projects gasping for breath. They were left to a painless death.

Mr. Locke was among the railroad men who in 1903 rode on the first train run from Eureka Springs, Ark., to Marshall, county seat of Searcy County, Arkansas, on the newly completed line of the Missouri and North Arkansas Railroad. Although Marshall had a population of only 750 or so, it was estimated that twice

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POVERTY IS FINE—HERE, TAKE OURS

It never has been established clearly that the so-called handicap of poverty is really a handicap at all. Do not financial resources which remove the sharp edge of necessity oftentimes exert an opiate influence? When a boy feels that there is no need for worry about the regularity of his three a day or about such creature comforts as sport roadsters, raccoon overcoats and trick cigar-lighters, has he an advantage over the boy who lives in a little house across the railroad tracks? Which, if either, is under a handicap?

George D. Locke

Probably the answer is that it all depends.

Nobody will deny that the stimulus of want has prodded more than one youngster to vigorous effort which eventually placed him high in the ranks of his vocation. Everybody knows, too, that inherited wealth has ruined many a life that would have been useful if devoted to the exercise of natural gifts.

So while according every ounce of credit due to the boy who, born in a home of want, fights his way upward by pluck, grit and hard work, it is only fair to slip a laurel wreath or two to the fellow who, lacking the spur of need, nevertheless turns his face against a life of ease and uselessness, jumps into the world's work with a whoop, finds joy in its adventures, welcomes a brush with those who want one, takes a licking with a grin and doesn't lose his head over a victory.

Magnetometer Study of Mississippi

Comparison of What Is Known of Major Geological Structures To Find If Relationship Exists

By L. Spraragen

The following two paragraphs are taken from the letter of transmittal from the state geologist to the governor and members of the Mississippi Geological Commission:

"In October, 1926, the Carter No. 1 well of the Amory Petroleum Co. of Amory, Monroe County, at a depth of 2,402 feet struck a gas sand which blew in with volume of about 5,000,000 cubic feet of gas per day, and has steadily maintained that pressure up till the present time (January 25, 1928). About a year later another well in the same field, the No. 1 Rye of the Arkansas Natural Gas & Fuel Co., located 15 miles southeast of the Carter No. 1 well, was brought in with a capacity of several million cubic feet of gas."

"These two wells definitely put Mississippi in the class of states in producing territory, so far as concerns natural gas. As yet commercial oil has not been discovered, but there seems good reason to expect that it will be. The oil fraternity generally has manifested renewed and augmented optimism in Mississippi as a probable future source of oil. Accordingly, many location have been made in different parts of the State, and a good many new wells have been drilled, or are now drilling. . . ."

The purpose of this study is to compare what is known of the major geological structures of the State with the magnetometer survey and find if any relation between the two exists. If the magnetic survey reflects the geological structure of the known areas then it may be possible to extend the general regional geologic knowledge by means of the magnetic intensity measurements to parts of the State where as yet sufficient well data is not available to draw the geologic structure.

General Magnetometer Results

As in the previous articles published in The Oil and Gas Journal two maps showing magnetic intensity results are presented.

Plate 1 shows the general distribution of the lines of equal vertical magnetic intensities. The contouring is done on a 100-gamma interval based on readings made by the Magnetic Division of the United States Coast and Geodetic Survey. The stations at which these readings have been made are indicated on the maps by the towns or cities. As a rule, it is a rather simple matter to locate the exact spot at which the magnetic determinations were made, for the United States Coast and Geodetic Survey has established these spots by means of a concrete marker.

The actual readings made by the United States Coast and Geodetic Survey involve the horizontal intensity, declination and dip. From the horizontal component and the dip readings it is possible to compute the vertical component.

It was pointed out in the article on Texas, which appeared in a recent issue of The Oil and Gas Journal, that any unusual magnetic disturbance beneath the earth's crust would manifest itself by a distortion of the lines of equal magnetic intensity.

Plate 1 shows several of these unusual disturbances, some indicating a higher than normal intensity, while some indicate a less than normal value of vertical intensity.

High Magnetic Trends

The following high magnetic trends are indicated in Plate 1:

1. A magnetic high trend in the vicinity of Iuka, Tishomingo County.
2. Ashland, Benton County; Holly Springs, Marshall County, through Oxford, Lafayette County; Water Valley, Yalobusha County, to Pittsboro, Calhoun County.
3. Tupelo, Lee County, to Okolona, Chickasaw County.
4. Columbus, Lowndes County, through Macon, Noxubee County; Philadelphia, Neshoba County; Forest, Scott County, to Raleigh, Smith County.
5. Paulding, Jasper County, to Collins, Covington County.
6. Paplarville, Pearl River County, to Bay St. Louis, Hancock County.
7. Clarksdale, Coahoma County, through Sumner, Tallahatchie County; Greenwood, Leflore County, to Lexington, Holmes County.
8. Belzoni, Humphreys County, through Rolling Fork, Sharkey County.
9. Jackson, Hinds County, to Hazlehurst, Copiah County.
10. Grenada, Grenada County, through Winona, Montgomery County, to Vaiden, Carroll County.

Associated more or less with the high trends just enumerated, Plate 1 shows the following low magnetic trends:

1. Aberdeen, Monroe County, through Fulton, Itawamba County, to Russellville (Alabama).
2. Walthall, Webster County, to Houston, Chickasaw County.
3. Marks, Quitman County, to Senatobia, Tate County.
4. Carrollton, Carroll County, through

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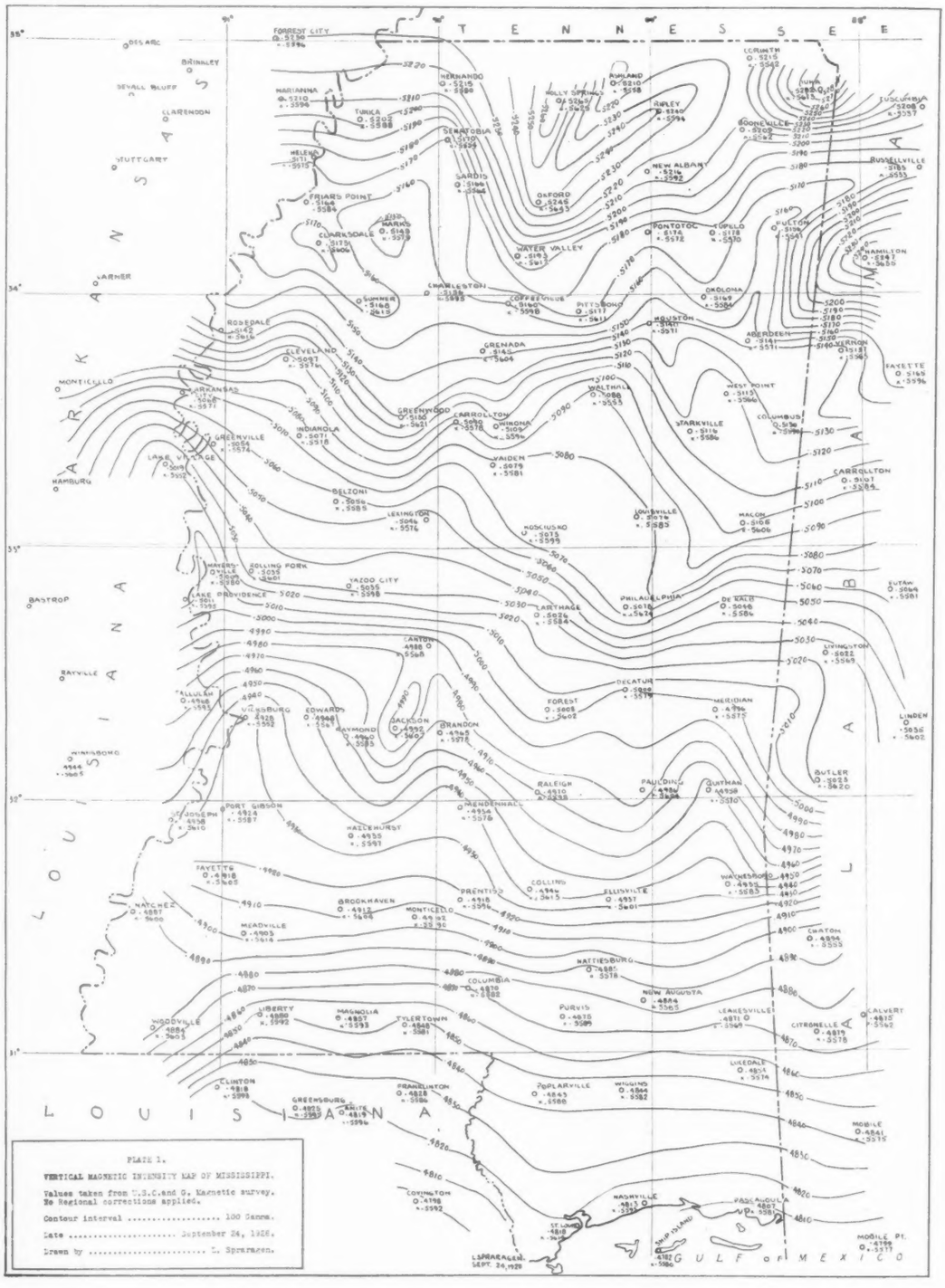

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MEMBER AUDIT BUREAU OF CIRCULATIONS

ONLY HALF THE PICTURE

The whole industry watches, week after week, for the figures on estimated crude oil production published in The Oil and Gas Journal.

But that is only half the picture.

These figures serve a useful purpose in giving a good idea of the trend of crude production, but recent developments have shown that to be fully effective they should be supplemented by similar information about the trend in the production and consumption of refined products.

The only accurate data on consumption now obtainable is the report of the Bureau of Mines issued monthly which is not available until five or six weeks after the close of the month.

These figures are not generally used by the industry because they are too late to be of timely value and are of interest chiefly in the compilation of statistical data which is largely only of historical importance.

There is plenty of evidence that the industry is in need of accurate and timely information on crude runs to stills.

Recent events in Oklahoma have proved once more that success in any movement for the conservation of crude oil is impossible without the aid of the refining branch of the industry.

Without timely, reliable figures on crude runs to stills and stocks of gasoline and gas and fuel oils, refiners operate blindly, running more crude to stills than is justified by market conditions.

This creates an artificial condition which stimulates a demand for crude in certain areas, regardless of the situation in the country as a whole, and, when overproduction of crude and refined products results, readjustments have to be made which react injuriously on the crude or refined structures and eventually on both.

If the industry had reliable weekly reports on crude runs to stills, along with the estimates on crude oil production, coupled with stocks of gasoline and gas and fuel oils, there would be a timely check on both raw material and manufacturing output that would give the whole picture of the situation to the industry, which could govern its operations accordingly.

This need for timely reports on refining statistics has been commented upon often in these columns. It was impossible to obtain them without the active co-operation of the refining industry as a whole as the experience of the Bureau of Mines has proved.

The only hope for securing this active co-operation was that the American Petroleum Institute would take up the matter and this has now been done.

At the most recent meeting of the Board of Directors, the Advisory Committee to the institute's statistical department recommended a weekly refinery report as of paramount importance and that steps toward the issuance of such a report on crude runs to stills, gasoline and gas and fuel oil stocks should be taken immediately.

The report of the committee, of which John D. Gill of the Atlantic Refining Co. is chairman, was approved by the Board of Directors of the institute and a form for such a weekly report has been sent out to all refiners.

It is hoped later to include figures on unfinished gasoline and naphtha at refineries, gasoline and naphtha at all bulk terminals of not less than 50,000 barrels capacity, and all gasoline, naphtha or unfinished equivalent in water-borne transit to refineries or bulk terminals, excluding tankers and barges of less than 20,000 barrels capacity.

The individual refiner's reports will, of course, be confidential and under no circumstances will be used for any other purpose than the compilation and publication of the consolidated figures.

Such reports, to be of any value whatever, must, however, be complete as well as timely and accurate. Figures, even when complete, dated from one area, do not satisfy the requirements of the industry. They must cover the entire country and industry to be of practical service.

Anything short of that will make them useless as guides to the industry in its operations. For this reason it is encouraging to learn from the institute that many refiners have already assured their willingness to supply the needed information and that it is assumed 100 per cent co-operation can be had.

Failure to co-operate and, above all, to do so promptly and fully, would prevent the whole purpose of the effort, which, after all, is for the advantage of every single unit in the industry. Those who do not co-operate promptly and fully cannot expect others to do so, and to the extent that they withhold information the consolidated figures will be impaired and misleading.

But with complete, accurate and timely figures on production of both crude and refined products, stocks and consumption, the whole industry would be able from week to week to map out its operations so that supply and demand would at all times be in equilibrium, stabilizing the industry and its markets.

One important effect of such reports being available from week to week should be the elimination of sectionalism in refining operations, seemingly impossible to overcome so long as refiners in any section were without definite knowledge of conditions in other areas.

With the figures separated into the refining districts now reported by the Bureau of Mines in its monthly reports, which, of course, would be continued by the Government, there would be no excuse of ignorance of the facts elsewhere.

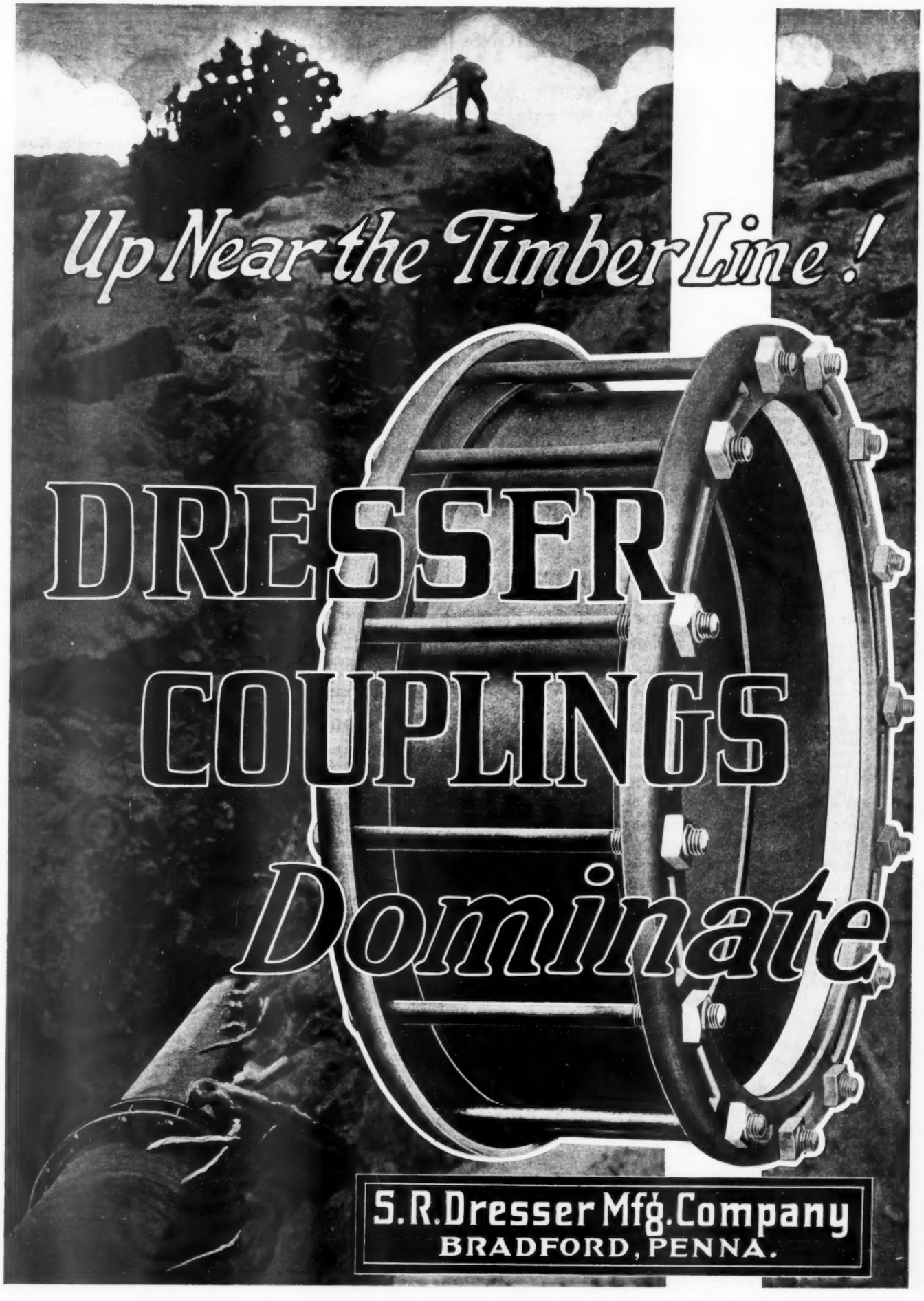
Ultimately, operations planned upon such definite knowledge of the whole situation throughout the country would lead to properly balanced production and the elimination of one of the chief elements of disturbance in the refined markets.

Stabilization of the refining industry is an essential to any successful plan for conservation of oil. If anyone does not now know that, he need only review the developments in the industry during the past few weeks.

Dependable weekly reports on refinery operations and conditions are indispensable as a warning signal just as the weekly crude production estimates have served the producing branch.

The only refinery report now available, five to six weeks late, is like running back to set the danger signal after a wreck.

Help the institute to throw the signal while there is time to apply the brakes.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REFINERS PROMISE CO-OPERATION IN WEEKLY REPORTS ON OPERATIONS

By A. E. Mockler

NEW YORK, May 14.—Companies representing more than 40 per cent of the entire refining capacity of the United States have favorably answered the request of W. R. Boyd, executive vice president of the American Petroleum Institute, to supply figures which will make possible the compilation of a weekly report showing total crude runs to stills, gasoline stocks, and gas and fuel oil stocks.

Returns already received from companies which have signified their willingness to co-operate represent a daily refining capacity of more than 1,000,000 bbls. Additional returns are reaching the Institute daily.

It is proposed to publish the figures in consolidated form every Wednesday, covering the previous week, the figures to supplement the monthly report of the Bureau of Mines.

Companies which have signified their willingness to report are as follows: Aetna Oil Service, Inc.; Anderson Prichard Oil Corp.; Ashland Refining Co.; Barber Asphalt Co.; Barnsdall Refineries; Bartles-Maguire Oil Co.; Bradford Oil Refining Co.; Col-Tex Refining Co.; Canfield Oil Co.; Chalmette Petroleum Corp.; Cities Service Refining Co.; Crew Levick Co.; Crystal Oil Works; Cushing Refining & Gasoline Co.; Dale Oil & Refining Co.; Dixie Oil Co., Inc.; Emlenton Refining Co.; Falls Refining Co.; Franklin Creek Refining Corp.; Homaokla Oil Co.; Independent Refining Co.; Indian Refining Co.; Johnson Oil Refining Co.; Kendall Refining Co.; Louisville Refining Co.; La Salle Petroleum Co.; Lubrite Refining Co.; Magnolia Petroleum Co.; McKean County Refining Co.; Ohio Valley Refining Co.; Oil Creek Refining Co.; Pampa Refining Co.; Pan American Petroleum & Transport Co.; Paragon Refining Co.; Pennsylvania Refining Co.; Pennzoil Co.; Phillips Petroleum Co.; Primrose Refining Co.; Pure Oil Co.; Rajah Oil & Refining Co.; Rock Island Refining Co.; Shaffer Oil & Refining Co.; Sinclair Refining Co.; Solar Refining Co.; Standard Oil Cos. of California, Kansas, Kentucky, New Jersey, and Ohio; Star Refining & Producing Co.; Starlight Refining Co.; Stellar Refining Co.; Sun Oil Co.; Swan Finch Refining Co.; Texas Pacific Coal & Oil Co.; Tide Water Oil Co.; Titusville Oil Works; Tri-State Refining Co.; Vacuum Oil Co.; Viking Oil Co.; Warner-Quinlan Co.; Waverly Oil Works Wickett Refining Co.; Carnegie Refining Co.; Elk Refining Co.; Empire Oil & Refining Co.; Garber Refining Co.; Gilmore Oil Co.; Holly Oil Co.; Humble Oil & Refining Co.; Independent Oil & Gas Co.; Sunset Pacific Oil Co.; Marland Refining Co.; San Angelo Refining Co.; Seaside Oil Co.; Standard Oil Co. of New York; Vernon Refining Co.; Western States Petroleum Co.; H. F. Wilcox Oil & Gas Co.; and Wirt Franklin Petroleum Co.

High Spots in Field News

MISSISSIPPI

Rankin County wildcat attracting attention.

KANSAS

Most intensive operating program ever staged in Kansas under way.

NORTH TEXAS

Ashe Syndicate's Palo Pinto County well making 10,200,000 feet of wet gas with slight show of oil.

GULF COAST

New salt dome opened in Orange County by The Texas Company's wildcat making 1,900 bbls.

NORTH LOUISIANA—ARKANSAS

Disappointments in Caddo Parish and Mount Holly district.

SOUTHWEST TEXAS

Shell corporation well in Joe Bruner Field, making 5,000 bbls., on fire.

Good gas well in northern Bee County.

OKLAHOMA

Oklahoma State Corporation Commission increased allowable production to 725,000 bbls.

Many crucial Seminole tests are at interesting depths.

ROCKY MOUNTAIN AREA

Active drilling campaign in Lea and Eddy Counties, New Mexico.

Vacuum Oil Co.'s wildcat estimated 5,000,000-foot gasser.

Water found in Vineland, Colo., tests.

CALIFORNIA

Progressive California operators will continue curtailment movement regardless of Oklahoma situation.

Big wells hold up State's output; production would be 75,000 bbls. more but for conservation.

Large gasser in San Joaquin Valley.

Late News from the Field

OKLAHOMA

McCulloch Oil Co.'s No. 1 McGilbray, SW NE, Section 4-8-8, Seminole County, had the top of the Hunton lime at 4,260 feet. The total depth, still in Hunton, is now at 4,303 feet, with 1,500 feet of oil in the hole. It will be swabbed to get a production gauge.

The corrected depth of the Houston Oil Co.'s No. 1 James, NE NW SW, Section 17-7-4, Pottawatomie County, in Viola lime, is 4,054-98 feet. In six hours it swabbed 507 bbls. It is an offset to the Magnolia Petroleum Co.'s Latimer well in the same section.

Simms Oil Co.'s No. 1 Lester, SE NE NE, Section 19-6-4, Pottawatomie County, the discovery well in the Asher district, produced 3,675 bbls. on air, Tuesday morning's gauge, the largest day's production.

Superior Oil Co.'s No. 1 Pratt, NE NW NW, Section 13-8-4, Pottawatomie County, has the Misener sand at 4,215 feet, the Hunton at 4,216 feet, and is now shut down at 4,220 feet with nothing showing. This well is a semiwildcat and has been holding a lot of attention.

Seminole Production

The production of the Seminole area by pools for May 13. The St. Louis figures are not available owing to high water:

Pools—	Wells	Bbls.
Little River	334	74,562
Carr City	38	13,241
Maud	116	12,674
Mission	113	37,198
Bowlegs	306	34,728
Earlsboro	307	61,800
Seminole	276	34,285
Searight	73	12,391
Total	1,563	280,879

KANSAS

British-American Oil Co.'s No. 1 McCarty, NE NW, Section 31-25-17w, Edwards County, was given a production test Sunday, May 12. It made 37 bbls. in 12 hours and is also making 6,000,000 feet of gas from sand at 4,544-56 feet. This rank wildcat is the first to have a good showing of oil in the county, and to be free of water intrusion, after a liner had been landed at 4,548 feet. The well is being drilled deeper on the last report at 4,565 feet.

Phillips Petroleum Co. and Twin Drilling Co.'s No. 1 Dechant, NE SE, Section 12-13-16w, Ellis County, has the Oswald pay at 3,118-22 feet with a 50-bbl. showing. This wildcat will be given a test by swabbing.

Barnsdall Oil Co.'s No. 1 Lauk, C SW, Section 35-18-21w, Ness County, has drilled deeper in the Gorham sand, from 4,180-82 feet, bailing 70 bbls. in 19 hours, with a trace of water. The top of the sand in this well was at 4,177 feet.

Prairie Oil & Gas Co.'s No. 1 Sandberg, C SW, Section 20-9-18w, Rooks County, wildcat, had the Gorham sand at 3,610-60 feet with a hole full of water and a small show of oil in the top. The well is now shut down but will probably be drilled deeper.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., May 14.—Shell Petroleum Corp.'s No. 1 Clyant Smith, in center of northeast end Joe Bruner Field, flowing at rate of probably 5,000 bbls. through 8¼-inch casing from Austin chalk is on fire.

NORTH TEXAS

FORT WORTH, Tex., May 14.—Ashe Syndicate's No. 2 J. B. Hart and others, SE, Section 29, Block 3, T.&P.R.R. Survey, Palo Pinto County, total depth 3,943½ feet, had gas sand 3,943 feet, making 10,200,000 feet of wet gas and a slight show of oil.

Phillips Petroleum Co.'s No. 1 Palmer, SE Section 31, Block B-2, H.&G.N. Survey, Gray County, Panhandle, topped granite wash at 2,795 feet and is drilling at 2,808 feet. At present well is producing 60 bbls. an hour with 20,000,000 feet of gas.

REFUGIO TANK READY

SAN ANTONIO, Tex., May 13.—The first of William F. Morgan's 55,000-bbl. tanks at the Refugio Field was ready to receive oil May 15 and the 6-inch pipe is loaded and en route for the line he will lay to Corpus Christi.

New Construction

Will build 100-mile gas line in Louisiana. Page 31.

Lone Star Gas Co. to build 200 miles of pipe line. Page 78.

May build 25-mile pipe line in Ontario. Page 78.

Southern Natural Gas Corp. to spend $35,000,000 on 1,400-mile pipe line project. Page 78.

Houston may duplicate gas mains. Page 78.

Three companies plan gas lines. Page 78.

To spend $250,000 improving case oil facilities in Los Angeles. Page 156.

Planning air plant in Pleasantville. Page 114.

Citizens Gas Co., Shelby, Mont., to extend line. Page 68.

Gasoline and carbon black plants to be erected in Louisiana. Page 139.

Humble building natural gasoline plant in Caldwell County, Texas. Page 139.

P. & R. letting contracts for refinery in Muskegon. Page 140.

Old Dutch to build refinery in Muskegon. Page 140.

VACUUM BUYS LEWIS LEASES IN BURBANK

Burbank crude, from the famous Osage County Pool of that name, is nationally known to the oil industry for its high lubricating oil content. The oil for a long time has commanded a premium over other Oklahoma oils of the same A.P.I. gravity. The Lewis Production Co., with a daily production of about 1,800 bbls. from 24 wells, is one of the largest producers in the field. The announcement was made this week that the company had sold its Burbank leases and production to the Vacuum Oil Co. of Philadelphia. The consideration is not given out, but it is said to be around $3,000,000.

The Lewis Production Co.'s acreage comprises 14 quarter sections and there are about 70 undrilled locations on the properties.

The Cosden Pipe Line Co. and the pipe line of the Johnson Refining Co. have been running the oil.

This is the second important sale the Lewis company has made since it started operating in the Burbank Field five years ago. It sold its first properties to The Texas Company, but soon got back into the field as a buyer of leases at Osage auction sales. It has materially helped in the development of the Burbank extension, a thumb-like projection from the main body of the field on the east side.

There are only three companies with a larger production in the Burbank Field than the Lewis Production Co. These are the Phillips Petroleum Co., with 3,775 bbls.; Kewanee Oil & Gas Co., with 2,611 bbls., and the Carter Oil Co. with 2,200 bbls. The Phillips Petroleum Co.'s production comes from 300 of its own wells and 180 wells in which it has a half interest with the Skelly Oil Co. The Kewanee Oil & Gas Co. has 91 wells and the Carter Oil Co. 286 wells. All of the wells listed are down to settled production having been drilled before the Lewis Production Co.'s wells, which yet have the high average of 75 bbls. per well per day.

The Vacuum Oil Co. has been a direct purchaser of Oklahoma crude, especially Burbank crude, for several years, but this is the first time it has purchased producing wells and leases in the State.

Wildcat Producer in Wichita County

Semiwildcat in Wilbarger Estimated 600-Bbl. Well. Gray County, Panhandle, Has Another Good Sized Completion

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., May 13.—The discovery of a semiwildcat in Wilbarger County, and a rank wildcat in Wichita County, were the features of the week, with a decrease in the Panhandle production balancing a small increase in the Wichita Falls district. These areas were considered very interesting and much activity in the way of leasing and drilling started as a result of the new strikes.

The Wichita County discovery was 2½ miles northeast of the old Sunshine Hill Pool and 2 miles west of the old Ramming Pool, one of the oldest areas in the county. This discovery is known as G. H. Howell and others' No. 1 J. B. Foster, 3,532 feet north and 150 feet east of the southwest corner of the H.&T.C. Survey. Topping sand at 1,793 feet oil rose in the hole several hundred feet. Sand was drilled to 1,799 feet where it was shut down and swabbed. The first 24 hours of swabbing yielded about 75 bbls., and the well is estimated at about that much daily.

The acreage surrounding this discovery is held by many independent operators, and there will, no doubt, be considerable drilling activity as soon as the well has proven itself.

Wilbarger County claimed attention when the Consolidated Oil Co.'s No. 1 Waggoner in the SE cor. N half NW, Section 40, M.E.P.&P. Survey, encountered pay sand from 1,861-70 feet. It was shut down at the latter depth. The first few hours of swabbing it averaged 60 bbls. an hour, causing an estimate of a 600 or 700-bbl. well. It is now being put on pump.

This well extends the 1,800-foot sand for some distance, and opens much new territory in that area. Geologists report it to be lower than wells in the Consolidated Pool, 2½ miles southeast. Semiwildcats of this nature generally create other activity in the immediate vicinity, and as a result of this find, nearby acreage will no doubt be tested soon.

Good Well in Gray County

Gray County in the Panhandle scored again this week with a good sized well in the Operators Oil Co.'s No. 1 Faulkner, in the SW cor., Section 90, Block B-2, H.&G.N. Survey. The well was completed at a total depth of 2,790 feet after striking big pay at 2,787 feet and flowing 3,860 bbls. the first 24 hours. Some 65,000,000 feet of gas was encountered at 2,760 feet, but this flow subsided and allowed deepening to the present level where it was completed. This is the second big Gray County well brought in by the Operators Oil Co. within 30 days, the former well being in Section 88, Block B-2, H.&G.N. Survey.

Plenty of drilling is under way on various tracts in the Buttram and adjacent pools in Jack County, but lack of water has held it up to a certain extent, especially in the Bryson Pool where the Panhandle Refining Co.'s No. 1 Daugherty in the northern part of the Isaac Hughson Survey extended the original Leidecker pay 1½ miles southwest last week. Total depth of this well is 3,097 feet where it has stood during the past week averaging about 3,100 bbls. daily, the best well in the history of the Bryson Pool, and proving up considerable acreage in this immediate area.

First Helium Shipment

It is reported that the first shipment of helium from the Government's new helium plant, west of Amarillo, was made during the week. A tank car filled with about 200,000 feet of the gas was shipped to Langley Field, Virginia. The Bureau of Mines operates the new plant which is known as the Amarillo Helium Plant. The helium is extracted from natural gas produced from the Cliffside structure northwest of Amarillo. This natural gas is said to have a helium content of 1¾ per cent, and gas from about 26,000 acres of land is available.

The oil and gas division of the Texas Railroad Commission for April shows 45 permits to drill issued in Brown County for the month. During the past week there has been no very interesting feature, but activities continue on the same scale as usual. C. O. Moore Oil Corp.'s No. 1 Cross, which created an extension to the Clark-Buffalo Pool last week, still holds the record as the best producer in the county in some time. This well was completed for 175 bbls. daily.

WICHITA COMPLETIONS

Week ending May 11

Archer County

Archer Drilling Co.'s No. 2 Thompson was drilled to a total depth of 1,597 feet and had an initial production of 30 bbls. oil and 8 bbls. water at 1,591-97 feet. Gynn-Boyd Drilling Co.'s No. 1 Oil Investment Co. fee had an initial production of 69 bbls. the first 24 hours at 1,580-93 feet. Hart & McLaughlin's No. 1 Stone was dry and abandoned at 1,725 feet. Hutchinson's No. 6 fee was dry and abandoned at 1,164 feet.

Johnson and others' No. 8 Wilson made 35 bbls. oil and 15 bbls. water at 1,565-69 feet. Magnolia Petroleum Co.'s No. 1 Ruthy made 6 bbls. oil at a total depth of 907 feet. Panhandle Refining Co.'s No. 1 Turbeville was dry and abandoned at 1,575 feet. Payne and others' No. 3 Parrish was drilled to a total depth of 1,577 feet and made 96 bbls. oil. The Texas Company and others' No. 2 Kemp & Kempner had an initial production of 62 bbls. at 1,817-19 feet. Beavers & Rose's No. 1 Hayter was dry and abandoned at 1,352 feet. Grebin and others' No. 4 Hennig had an initial production of 38 bbls. at 1,431-43 feet. Hines' No. 1 Hamilton was dry and abandoned at 1,400 feet. The Texas Company and Long's No. 1 Lasster was dry and abandoned at 1,503 feet.

Clay County

Mid-Continent Holding Co.'s No. 4 Wright was dry and abandoned at a total depth of 840 feet. No. 5 Wright had an initial production of 35 bbls. at 832-36 feet. No. 6 Wright was dry and abandoned at a total depth of 848 feet. Stump & Co.'s No. 1 Boddy was dry and abandoned at 1,955 feet.

Cooke County

Mitchell and others' No. 1 Mitchell was dry and abandoned at 1,718 feet. Pure Oil Co.'s No. 7 Embry was drilled to a total depth of 1,202 feet and had an initial production of 40 bbls.

Jack County

Burkett and others' No. 1 Wade location was abandoned. Buttram Petroleum Co.'s No. 1 Vanhooser topped the pay at 2,043 feet, had an initial production of 25 bbls. and was drilled to a total depth of 2,051 feet.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ended May 13

CARSON COUNTY

Company, well, farm, name, section and block—	Remarks—
Champlin Ref. Co.'s No. 3 McConnell, 330 ft. S and E of NW W¼ NW, Sec. 67, Blk. 4, I.&G.N.R.R. Sur.	Set 10-in. csg. at 1,075 ft.
Empire G. & F. Co.'s No. 1 Armstrong, 330 ft. from S line and 330 ft. from E line of NW SE, Sec. 31, T.T.R.R. Sur.	Drlg. 2,680 ft.
Empire G. & F. Co.'s No. 15 Burnett, C NW, Sec. 4, Blk. 5, I.&G.N.R.R. Sur.	Drlg. 2,360 ft.
Empire G. & F. Co.'s No. 16 Burnett, C NW cor. Sec. 104, Blk. 5, I.&G N.R.R. Sur.	Drlg. 495 ft.
Gulf Prod. Co.'s No. 1 Block, 330 ft. S and W of NE cor. NW, Sec 111, Blk. 4, I.&G.N.R.R. Sur.	Drlg. 1,725 ft.
Empire G. & F. Co.'s No. 5 M. P. Co.'s "A", 330 ft. S and E of NW cor. SE SW, Sec. 91, Blk. 4, I.&G.N. Sur.	Spudding.
Gulf Prod. Co.'s No. 6 Noel, 330 ft. S and 1,320 ft. E of NW cor. SW, Sec. 198, Blk. 3, I.&G.N. Sur.	Oil 3,170-75 ft; 58,000,000 ft. gas; T.D. 3,248 ft; swbd. 52½ bbls. oil in 5 hrs.
Marland Prod. Co.'s No. 1 Burnett-L, 440 ft. S and 1,320 ft. NW NE cor. Sec. 79, Blk. 4, I.&G.N. Sur.	C.O. 2,358 ft.
McConnell O. & G. Co.'s No. 1 McConnell, 330 ft. from N line, 330 ft. from E line W½ NE, Sec. 65, Blk. 4, I.&G.N.R.R. Sur.	Location.
McElroy Oil Co.'s No. 1 Lewis, 330 ft. S and E of NW cor. SW NE, Sec. 115, Blk. 4, I.&G.N.R.R. Sur.	Drlg. 2,750 ft.
Midwest Explin. Co.'s No. 1 Cooper, 330 ft. each way from SE cor. W½ NW, Sec. 5, Blk. 9, H.&G.N. Sur.	Rigging up.
Morris et als' No. 1 Barnard, NW cor. SW SE, Sec. 44.	2,0-0,000 ft. gas 2,752-62 ft; S.D. 2,775 ft.
Ryan Oil Co.'s No. 3 Black, 990 ft. from S line, 330 ft. from E line NE Sec. 111, Blk. 4, I.&G.N.R.R. Sur.	Location.
Spartan Oil Co.'s No. 1 S. Bednorz, NW cor. E½ NW, Sec. 202, Blk. 3, I.&G.N. Sur.	T.D. 3,393 ft; P.B. 3,281 ft; shot 30 qts. 3,274-81 ft; no results.
Skelly Oil Co.'s No. 13 Schafer, 330 ft. N and E of SW cor. Sec. 88, Blk. 4, I.&G.N. Sur.	Drlg. 1,100 ft.
Skelly Oil Co.'s No. 14 Schafer, 330 ft. S and W of NE cor. Sec. 65, Blk. 4, I.&G.N.R.R. Sur.	Drlg. 974 ft.
The Texas Corp.'s No. 1 Quinn, 330 ft. from S line and 330 ft. from W line SE, Sec. 7, Blk. 9, I.&G.N. R.R. Sur.	Drlg. 2,350 ft.
Travis et als' No. 1 D. A. Harrel, C NE NE, Sec. 162, Blk. 7, I.&G.N. Sur.	Fish. 3,390 ft.
Ware et als' No. 1 Ware, 990 ft. S and 400 ft. E NW cor. Sec. 18, Blk. 3, A.B.&M. Sur.	Fish. 4,625 ft.

CASTRO COUNTY

Colorado O. & R. Co.'s No. 1 M. Slemmons, SW cor. Sec. 73, Blk. M-17, B.S.&F. Sur.	Rig blown down.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE, Sec. 333, Blk. M-6, S.K.&K. Sur.	S. D. 510 ft. for csg.

CHILDRESS COUNTY

C. L. Sloane et als' No. 1 B. P. Smith, Sur. 49, F. P. Knott lands	S.D. 4,340 ft.
The Texas Co.'s No 1 Smith, 100 ft. each way from	

COCHRAN COUNTY

Marland Prod. Co.'s No. 1 Slaughter-A, 330 ft. from W and 430 ft. from S lines, League 130, Carson County School land	Drlg. 1,650 ft.

COTTLE COUNTY

Explin. Co.'s No. 1 Richards	S.D. 3,535 ft. for csg.
Explin. Co.'s No. 4 Matador Land & Cattle Co., C Sec. 46, J. H. Stephens Sur.	S.D. 3,227 ft.

(Continued on Page 72)

Estimated Daily Average Production
Week Ending May 11

NORTH TEXAS

Panhandle district—	Bbls.
Carson County	8,340
Hutchinson County	25,010
Gray County	24,375
Moore County	2,775
Potter County	10
Wheeler County	825
Total this week	59,335
Total last week	60,265
Decrease	930
Wichita Falls district—	
Archer County	16,841
Baylor County	74
Clay County	593
Cooke County	6,699
Jack County	2,808
Haskell County	175
Montague County	6,902
Throckmorton County	677
Wilbarger County	27,016
Young County	6,904
Wichita County	27,231
Total this week	96,520
Total last week	95,558
Increase	962
Ranger district—	
Brown County	7,893
Callahan County	3,869
Coleman County	3,787
Comanche County	1,223
Palo Pinto County	369
Ranger	5,147
Shackelford County	13,329
Stephens County	6,304
Total this week	41,912
Total last week	42,111
Decrease	199
Grand total this week	197,767
Grand total last week	197,934
Decrease	167

Wichita County

Golding-Cochran's No. 1 Waggoner Brothers was dry and abandoned at a total depth of 2,006 feet.

Wilbarger County

Clark and others' No. 1 Waggoner was drilled to a total depth of 1,896 feet, topped the pay at 1,888 feet and had an initial production of 193 bbls. Consolidated Oil Co.'s No. 1 Waggoner had an initial production of 350 bbls. at 1,849-70 feet. Easter Oil Co.'s No. 2 Waggoner had an initial production of 200 bbls. at 1,915-24 feet. Fain-McGaha Oil Corp.'s No. 10 Waggoner had an initial production of 10 bbls. at 2,380 feet. Its No. 12 Waggoner had an initial production of 75 bbls. at 2,313-26 feet and was drilled to a total depth of 2,340 feet. Golding-Cochran and others' No. 4 Waggoner was drilled to a total depth of 2,406 feet and had an initial production of 250 bbls. Grayback Development Co.'s No. 1 Waggoner was drilled to a total depth of 2,021 feet and was dry and abandoned. Lewis Production Co.'s No. 7 Waggoner location was abandoned. Its No. 8 location was also abandoned. Melat Oil Co.'s No. 3 Waggoner had an initial production of 75 bbls. at 1,988-98 feet. Phillips Petroleum Co.'s No. 4 Waggoner had an initial production of 85 bbls. at 2,305-25 feet. Staley, Wynne & Co.'s No. 1 Waggoner had an initial production of 135 bbls. at 1,914-24 feet. The Texas Company's No. 1 Waggoner was dry and abandoned at 2,572 feet. Waggoner Refining Co.'s No. 6 Waggoner had an initial production of 25 bbls. at 2,422 feet.

Young County

Callender's No. 1 Hamilton was dry and abandoned at 950 feet. Continental Oil Co.'s No. 7 Campbell made 148 bbls. at 878-89 feet. Kimbrell & Lyles' No. 3 Dyer made 5 bbls. at 565-82 feet. Lloyd Oil Co.'s No. 2 Gregg was dry and abandoned at 540 feet. Smith & Smith and others' No. 1 Bentley was dry and abandoned at 854 feet. Steed & Gans' No.

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Yates Allowed Output is Increased

Collection of Seepage Large Enough To Be Problem. Draughts on Storage Increase. Bashara Well Controlled

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., May 13.—The Railroad Commission of Texas published a notice of meeting, to be held in Austin May 13, of all parties interested in the Yates Pool, Pecos County, to form the basis for the determination of questions presented by applications, namely, whether the seepage or migratory oil coming from shallow strata in Yates Pool is proratable oil, and whether Rule 37 of Oil and Gas Conservation rules and regulations published in Oil and Gas Circular No. 13, page 19, adopted November 26, 1919, shall apply to the ditch proposed to be excavated by Marland Production Co. for the purpose of collecting and recovering seepage and migratory oil from shallow gravel strata, which would otherwise be wasted, and which will, if discharged into the river, pollute the waters. At the hearing the commission will determine the issue raised by the applications of certain companies.

W. A. Moncrief, Yates Field proration umpire, Mr. Wagner of the Mid-Kansas Oil & Gas Co., Tulsa, and F. J. Adams of the Gulf Production Co., Fort Worth, make up the advisory committee which will attend the meeting.

Seepage Collected

The first seepage in the Yates Pool occurred October 30, 1928, and up to and including March 31, 1929, the Grayburg Oil Co. collected 81,345 bbls. of seepage oil, and in April collected 48,085 bbls., a total of 129,430 bbls. The Marland Production Co. collected the following, from two pits and four shallow wells drilled purposely to collect seepage oil; up to and including March 31, 1929, 20,589 bbls.; April, 28,367 bbls.; a total of 48,956 bbls. Its first shallow well was drilled February 22, 1929, and all four are located on the "A" lease. The Mid-Kansas Oil & Gas Co. and Transcontinental Oil Co. have produced from their two shallow wells on their Yates "C" lease, up to and including March 31, 1929, 2,855 bbls., and in April 6,091 bbls., a total of 8,946 bbls. The total amount picked up by the four companies was 187,332 bbls.

This seepage oil has not come under the proration amount, it being regarded as purely a waste product, but due to the amount becoming so great daily, around 2,800 bbls., it has become quite a problem, and one to be figured out by the Railroad Commission, advisory committee and company officials.

Draught on Storage

Demand exceeded supply for the second time in the history of West Texas, last week, draughts on storage increased to 9,622 bbls. daily, this comparing with 7,057 bbls. per day during the previous week, an increase in daily withdrawals of 2,565 bbls. The increases in runs to refineries, and small increase in pipe line movements were the causes of the above draughts on storage. This change in movements of oil makes the market look as if there was an increasing demand for "sour crude." Demands by several companies operating in the Yates Pool, for more production and pipe line runs from that area also make the "sour crude" market look more promising.

Decrease in Production

There was a decrease of 4,941 bbls. in daily average production in West Texas this week, Winkler County falling short 3,895 bbls., Pecos gaining 2,052 bbls., Howard and Glasscock Counties falling short 1,881 bbls., with practically all of the other counties showing slight decreases.

ESTIMATED DAILY AVERAGE PRODUCTION WEST TEXAS
Week ending May 11

County—	Wells	Prod.
Crane	305	34,453
Crockett	44	2,032
Ector	3	3
Fisher	7	881
Glasscock	25	635
Howard	309	44,100
Jones	83	4,171
Loving	11	728
Mitchell	145	2,647
Pecos	306	89,950
Reagan	241	18,559
Runnels	3	72
Scurry	5	31
Upton	237	13,224
Ward	4	1,381
Winkler	588	139,750
Total	2,316	352,617

Yates Allowance Increased

Increase in allowed output of the Yates Pool, Pecos County, was to go into effect May 10, 100,000 bbls. being the daily average allowed by the Railroad Commission and advisory committee. This increase will probably change the status of the pool during next week, production and pipe line runs possibly both showing increases. At present the Gulf Pipe Line Co. is running around 9,500 bbls. daily from the field; Illinois Pipe Line Co., 37,500 bbls., to be increased around 50,000 bbls. daily; Humble Pipe Line Co., around 28,500 bbls. daily; and Shell corporation about 12,500 bbls., a total of 87,500 bbls. The Simms Oil Co. is running about 5,800 bbls. daily until it fills its storage.

Bashara Well Controlled

Bashara's No. 1 fee, located in SW Section 17, Block B-3, P.S.L. Survey, Winkler County, which blew in as a big gasser last week and burned down the rig, was finally brought under control and the fire extinguished. It is standing at 2,481 feet, temporarily completed as a gasser, gauging 19,430,000 feet. The Amerada Petroleum Corp. is selling the gas from its No. 1 Walton in Section 48, Block 26, P.S.L., 3 miles southwest of the Bashara well, the M. & M. pipe line taking it and reselling to other companies about the field for drilling and pumping purposes, and it is possible that Mr. Bashara will sell the gas from his well to this company.

The World Oil Co.'s No. 1 McDowell was pumped several times during the week, one 24-hour gauge producing 250 bbls. It was shut down for 13½ hours, after which it pumped 225 bbls. in four hours. It looks good for a 250-bbl. well. Total production to date is 1,125 bbls. This well is in Section 21, Block 34, Township 2s, Glasscock County, and opened the first individual pool in the county, lying 6½ miles southwest of extension producers of the Howard County Field. Lease trading has been very active since this well encountered its first showing of oil from 2,350-56 feet, and during the past two weeks trading has been on the increase, acreage advancing in price accordingly.

Pecos Valley Play

Pecos County has been getting quite a play around the Pecos Valley area, 17 miles northeast of Fort Stockton, several wells drilling at present, with rumor of others to start. M. H. Black's No. 1 Pecos Valley Oil Co., 2,310 feet from SE and 1,650 feet from SW lines of Section 22, Block 10, H.&G.N., in the same section as the discovery well of this area, was shut down at 1,698 feet, making several small heads of oil. Top of the pay was at 1,618 feet. This well does not look very substantial to date. Perren and others' No. 1 H. J. Eaton in Section 27, Block 3, H.&T.C. Survey, 1½ miles east of the Pecos Valley discovery well, is still shut down at 1,506 feet, with 5-3/16-inch casing set on bottom, the last joint perforated. Gas is still gauging 18,000,000 feet, but is shut in. It was first thought that this would be an extension of the Pecos Valley Pool, but it failed to produce oil.

Ward County Gains

Ward County was awarded with increased production this week in the Shipley Pool, the Atlantic & Delmar's No. 1 Hayzlett, Section 17, Block 5, topping the pay at 2,473 feet and being shut down at 2,504 feet, flowing 47 bbls. through tubing. It was shot with 80 quarts from 2,473 to 2,500 feet. Two-inch tubing was set with packer at 2,463 feet and the well produced 153 bbls. in 14 hours, on the first flow. It was completed for 47 bbls. flowing through the 2-inch.

J. H. L. Oil Co.'s No. 2 Hayzlett topped the pay at 2,430 feet and was shut down at that depth. It is now cleaning out for tubing and testing. It is estimated good for 140 bbls. daily. Shipley and others' No. 1 Hayzlett in Section 17 was shot with 115 quarts from 2,465 to 2,503 feet, after topping the pay at 2,480 feet and being shut down at 2,506 feet. This well flowed 175 bbls. the first 24 hours.

Taylor County Wildcat

Although little interest has been aroused in Taylor County by any of its wildcat tests, the Mid-Continent Oil & Gas Co.'s No. 1 T. H. Taylor, wildcat in the west central part of the county, is due its share of attention, having encountered oil-bearing formations in lime between 2,380 and 2,450 feet. It was shot twice during the week at these depths, and is now cleaning out for a swabbing test. Nothing can be told of it until it is thoroughly cleaned and tested. The hole now has several hundred feet of fluid standing in it. While it is entirely possible and quite probable this test will fail to make a producer of commercial value, many think it will at least show enough to warrant further testing in the area surrounding. Total depth of this test was previously 3,006 feet, but due to no further shows of any merit it was plugged back to 2,450 feet, where it was shot during the week.

It is a general report that L. C. Harrison of the J. H. L. Oil Co. and Mr. Shipley, discoverer of the pool northeast of Grand Falls in Ward County, have

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WILDCAT OPERATIONS IN WEST TEXAS

Week Ended May 13

ANDREWS COUNTY

Company, farm and location—	Remarks—
Mid-Continent Oil & Gas Co.'s No. 1 Fisher, 1,320 ft. N and 200 ft. E or SW cor. Sec. 5, Blk. A-36	Drlg. 1,700 ft.

BORDEN COUNTY

Gibson & Johnson's No. 1 Higginbotham, middle of S line of Sec. 8, Blk. 31, Twp. 3n, T.&P.R.R. Sur.	Drlg. 3,155 ft.
Moncrief et al's No. 1 Munger, C of SW Sec. 14, Blk. 31.	Moving in material.
Teas & Wheeler's No. 1 Long, 1,320 ft. N and E of Sec. 27, Blk. 30, T.&P. Sur.	Location.

BREWSTER COUNTY

E. W. Bateman et al's No. 1 Nevill, 2,000 ft. from S line and 1,000 ft. from W line of Sec. 64, Blk. 13, G.H.& S.A.R.R. Sur.	Cleaning out 1,973 ft.
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor. Sec. 45, Blk. G-15, G.C.&S.F.	Drlg. 1,700 ft.
Cowden & Bowser's No. 1-A Jackson & Harmon, Sec. 1, Blk. 331, T.C.R.R. Sur.	Set 8-in. 1,530 ft.; shut down 2,000 ft.
Forrest Oil Co.'s No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	Rigging up.
J. M. Hickey's No. 1 Jackson & Harmon, NE cor. Sec. 182, Blk 9, G.H.&S.A. Sur.	Shut down 2,000 ft.
Johnson & Weekley's No. 1 Jackson & Harmon, C Sec. 104, Blk. 10, G.H.&S.A. Sur.	Fishing 1,005 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 1,740 ft.

COKE COUNTY

Cates & Dennis' No. 1 Mimms, 2,500 ft. S and 330 ft. E of NW cor. Sec. 47, Blk. 4, T.&P. Sur.	Show oil 1,580 ft.; underreaming at 1,655 ft.
Cates & Dennis' No. 2 Mimms, 2,340 ft. N and W SE cor. Sec. 8, Blk. W, T.&P. Sur.	Spudded and shut down.
Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H.&T.C. Sur., elev. 2,750 ft.	Cleaning out 2,840 ft.
Mid-Kansas Oil Co.'s No. 1 W. E. Lackey, 330 ft. N and E of SW cor. Sec. 272, Blk. 1-A, H.&T.C.	Pay 3,755-56 ft.; 6⅝-in. casing set 3,451 ft.; fishing at 3,785 ft.
Ray E. McCamey et al's No. 1 McCutchen, 2,300 ft. S and 785 ft. W of NE cor. of T. J. Hines Sur. No. 4	Drlg. 790 ft.

CONCHO COUNTY

Duffy et al's No. 1 Gilliam, 1,520 ft. N and 1,120 ft. W of SE cor. Sec. 21, Blk. 10, H.&T.C.R.R.	Location.
Fred Spratt's No. 1 Bryson, Sec. 30, 150 ft. from N and W cor.	Location.
Jones & Leiner's No. 1 Jones, 420 ft. S and 15 ft. E of NW cor. John G. Reh Sur. No. 1,878	Fishing 1,100 ft.

CRANE COUNTY

Duffey et al's No. 5 Cowden, 200 ft. each way from S and E lines Sec. 17, Blk. X, C.C.S.D.&R.G.N.G.	Drlg. 1,700 ft.; top salt 970 ft.
Gulf Prod. Co.'s No. 61 McElroy, Sec. 200, Blk. F, 660 ft. E of 58	Drlg. 2,836 ft.
Gulf Prod. Co.'s No. 62 McElroy, 660 ft. from W of 57, Sec. 201, Blk. F	Cleaning out 2,892 ft.
Gulf Prod. Co.'s No. 63 McElroy, 2,762 ft. S and 2,310 ft. E of NW Sec. 206, Blk. F, C.C.S.D.&R.G.N.G.R.R. Survey	Drlg. 305 ft.
Gulf Prod. Co.'s No. 7 Waddell, Sec. 10, Blk. B-23, 2,640 ft. from S, 330 ft. from W	Shut down 745 ft.

CROCKETT COUNTY

Eppenaur et al's No. 2 Noelke, 500 ft. N and 1,250 ft. E of SE cor. Sec. 64, Blk. 1, I.&G.N.R.R. Sur.	Shut down 565 ft.
Lewis & Daniels' No. 1 Pecos River Bed, 19 yards S and 37 degrees E of NW cor. Sec. 33, Blk. 1, I.&G.N. Sur.	Shut down 1,002 ft.
W. W. Donnelly & Young's No. 1 Shannon, SW SW SE Sec. 42, Blk. BB, T.C.R.A. Sur.	Shut down 745 ft.
W. W. Donnelly & Young's No. 1 Middlebuster, C Sec. 11, Blk. 9, D.&S.E. Sur.	7,000,000 ft. gas at 1,663 ft.; shut down 1,755 ft.
W. A. Moncrief et al's No. 1 Massie, 1,170 ft. N and 1,320 ft. E of SW cor. Sec. 47, Blk. UV, G.C.&S.F. Sur.	Drlg. 1233 ft.

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In one part of the country you may find oil cracked with one process, in another part, another process, but the *one* process that will give the greatest yield of gasoline from the charge in *every* part of the country, or in *any* country, and no matter what crude, or portion or cut of that crude is cracked — the *one* process that produces the most gasoline — is the Dubbs Cracking Process

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Watch Many Crucial Seminole Tests

Wells That Will Have an Important Bearing on Future Operations Are at Interesting Depths. Lively Leasing

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

The finding of oil in the Wilcox sand in the McCulloch Oil Co.'s well in Section 4-8-8, eastern Seminole County, in an area that had been condemned for several years, was the outstanding feature of the week in Oklahoma.

Prairie Oil & Gas Co. and T. B. Slick's No. 1 Lester, NE SE NE, Section 19-6-4, Pottawatomie County, south offset to the discovery well in the Asher district, is cementing 6-inch casing in the Viola lime at 3,615 feet while the total depth is 3,620 feet, with a good showing of oil in the hole. The Viola was topped at 3,605 feet, which is 21 feet higher than in the discovery well of Simms Oil Co. The crew on this well has made a record run. It was spudded in on April 21 and 22 days later the cement was run at the above depth. The sand will be tested within the next few days.

The Sinclair Oil & Gas Co.'s No. 1 Stamper, NE SW NW, Section 30-11-2w, topped a gas stratum at 6,070-6,120 feet and uncovered a 25,000,000-foot gas production. The gas sand is in the Oswego group and corresponds to the Peru sand. The discovery well had this same sand at 6,030-65 feet but it was dry. The Sinclair company is mudding off the gas and will drill to the deep pay from which the Indian Territory Illuminating Oil Co.'s well is producing at a total depth of 6,598 feet.

Oil in Western Payne County

The Reiter-Foster Petroleum Corp. and others have a hole full of oil in their No. 1 Watkins, C SW SE, Section 5-19-1w, Payne County. This is a community test. The oil is supposed to be coming from the Simpson lime at 4,837-40 feet. The well made one flow in the slush pit for 10 minutes and was shut in until tanks are set. It will be given a production test the latter part of the week. The same company completed No. 1 Kenneman, SW cor., Section 4-19-1w, at 4,775-78 feet in October, 1926. The well started at 25 bbls. a day and is doing nearly that quantity now. The wells, in wildcat territory, are nearly a half a mile a part.

McCulloch Oil Co. has opened what looks to be a new Simpson Pool in the extreme eastern part of Seminole County, about 3 miles north of Wewoka. The well is a decided wildcat as the nearest production is in the original Wewoka Pool several miles south of that town. It is No. 1 McGilbray, SW NE, Section 4-8-8. The top of the Simpson was found at 4,261 feet and was drilled in 6 feet. The well filled up 1,500 feet with oil in a short time. The Viola lime in this test was at 4,197 feet, the 5-inch casing was set at 4,226 feet.

The township has been tested in Sections 1, 2 and 9 where several dry holes were completed in the Wilcox horizon. If a pool develops from this well it may point in a northwesterly direction, from the well.

The same company's well, No. 1 Hollis, SE NW, Section 16-10-6, Seminole County, has the top of the Viola at 4,547 feet and is running 5-inch casing at 4,548 feet. The test will be an extension to the Searight Pool on the north and is creating a lot of interest as it is drilling at an important depth.

Seminole Production Steady

The production of the entire Seminole area has been holding generally steady, with the exception of Mission and Little River. These two pools are showing a small increase each week mostly due to the large production in wells that are considered to be inside locations.

Leasing is Active

The districts around the Simms Oil Co.'s well in Section 19-6-4, and the Martin & Irwin's well in Section 2-7-4, both in Pottawatomie County, continue to be the hottest spots in the matter of field operation in the State at this time. The town of Asher, a quarter mile west of the discovery well in Section 19-6-4, is having an oil boom together with townlot drilling. Leases on some of the lots are bringing fabulous prices. Five rigs have all ready been erected and several more locations made.

The well in Section 2-7-4 that came in making 2,460 bbls. and declined to 1,050 bbls. in about three weeks, has been pinched in and will be allowed to produce only 100 bbls. a day until some of the offsets are drilled in the pay sand. The production is in the Hunton lime and is over a mile from the nearest producing well.

Township 7-4 is undergoing a drilling campaign that will prove up or condemn the greater part of it in a short time. While considerable production has been found in the Hunton and Simpson very few wells are producing from the Wilcox sand. As it is bounded on the east by the most prolific Wilcox production in the Seminole area, most operators are of the opinion that in some place, somebody will be fortunate enough to find the right spot and their efforts will be very substantially rewarded.

A well that is apparently in line with deeper production is the Independent Oil & Gas Co.-Atlantic Oil Producing Co.'s No. 1 Rhodd, NW cor., Section 16-7-4. It flowed 75 bbls. natural from the Hunton lime at 3,625 feet, topped the Sylvan shale at 3,860 feet, and is drilling at 3,925 feet. The well is reported to be running very favorably towards finding production in the Simpson or Wilcox sand. It is a half mile north of the Darby Oil Co.'s No. 1, SE NW, Section 16-7-4, which drilled into the Hunton at 3,630-3,885 feet the first of March this year. The initial production was 779 bbls. and on May 1 it was still making 500 bbls.

Water in the Simpson

The Amerada Petroleum Corp.'s No. 1 Richardson, NE SW Section 16-7-4, Pottawatomie County, found water in the Simpson lime.

The well is a mile and a half east of the Magnolia Petroleum Co.'s Latimer well, the original Simpson lime well that drilled in with an initial production of better than 2,000 bbls. The Amerada's well found water in the Simpson at 4,180-4,214 feet. The well also offsets the discovery well of the Darby Petroleum Co., which is producing from the Hunton lime. The well will be plugged back to test out the Hunton, where there was a small showing of oil.

The other well of importance in relation to future drilling is the Carter Oil Co. and others' community well, No. 1 Jackson, SW cor. NW Section 11-9-6, Seminole County, midway between the Searight and Seminole Pools. The pool has now three producers, two in the Wilcox sand and the other in the Hunton lime. The Wilcox sand in the Carter Oil Co.'s No. 1 Jackson was at 4,252-70 feet with an initial production of 540 bbls.

The Magnolia Petroleum Co. has staked a location in the NE SE Section 18-7-4, Pottawatomie County, which is a quarter of a mile east of its Latimer well in 17-7-4, which was a big producer in the Simpson a short time ago.

The Indian Territory Illuminating Co.'s No. 1 Peterson in Section 24-7-5 Seminole County, has water in the Simpson lime from 4,435-36 feet. This well is being watched with considerable interest as it is a rank wildcat and much depends upon whether or not it gets production.

A Surprise Well

A well that caused considerable surprise was the Fern Oil & Gas Co.'s No. 1 Holmes, CEL SE SE Section 24-11-10 Okfuskee County. In 12 hours it flowed 251 bbls. from what is supposed to be the Salt salt topped and total depth of 1,852 feet. The first 24 hours the well produced better than 600 bbls. of high gravity crude testing 41 degrees. The owners have shut it down to erect tanks. It is the only well in that area to report a showing of oil at this depth, being directly west of the Riverland Pool in Section 19-11-11, which was opened several years ago. All the oil in the pool was produced from the Wilcox sand.

Seminole Pipe Line Runs

The daily average pipe line runs from the Seminole area for the past week are as follows:

Company—	Bbls.
Barnsdall	9,889
Champlin	5,760
Continental	740
Consolidated	152
Cosden	18,285
Empire	9,357
Gulf	39,285
Independent	280
Magnolia	51,190
Oklahoma	72,941
Prairie	55,760
Producers & Refiners	152
Pure	2,945
Shaffer	4,417
Shell	8,696
Sinclair	27,917
Texas	18,235
Tidal	17,170
White Oak	2,922
Total	275,850
Tank cars	6,850
Grand total	282,650

McGee Brothers and others have spudded in their wildcat well in the eastern part of Hughes County known as No. 1 Stidham, SE SW, Section 25-8-11, near Lamar. This test is 1½ miles west of the famous Newman well, more commonly known as the "Vaseline well," which was completed in 1923 and is still producing.

The Mid-Continent Petroleum Corp. and Independent Oil & Gas Co.'s No. 1 McGirt, SE cor. SE, Section 31-9-9, the only oil well in the new gas field northwest of Yeager in Hughes County, was allowed to produce naturally at 3,542-56 feet and flowed 75 bbls. in 24 hours on a recent gauge.

Independent Oil & Gas Co.'s No. 1 Marshall, NE NW, Section 7-8-9, a half mile west of the discovery gas well, topped the Gilcrease sand at 3,215 feet, and will drill in in a few days.

Water in Wilcox in Cosden Test

J. S. Cosden, Inc.'s No. 2 Anderson, SE NW SW, Section 13-9-5, in the east extension of the Earlsboro Pool, has 150 feet of oil in the hole from the Wilcox sand at 4,256-65 feet. The owners plugged back to 4,263 feet and gave the well a 5-quart shot and are now cleaning out. There is some doubt as to what this well will produce. Some express an opinion that it will not make a commercial producer. No. 1 Anderson, which was drilled in a short time ago, is still making 3,200 bbls. daily.

The Independent Oil & Gas Co.'s No. 1 Chisholm, SE cor. NW SE, Section

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WILDCAT OPERATIONS IN OKLAHOMA

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Bros.' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	Drlg. 350 ft.
Washoma Oil Co.'s No. 1 Acre, SW cor. NE Sec. 14-24-11w	Rig.

BECKHAM COUNTY

C. & H. Petroleum Co.'s No. 1 Barnes, SW cor. NW NE Sec. 32-9-22w	Shut down 3,460 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w	Shut down 725 ft.
Producers Exploration Co.'s No. 1 Seidell, SE cor. SW SW Sec. 17-9-22w	Shut down 2,402 ft.
Trees Oil Co.'s No. 1 Rodgers, SW cor. SW Sec. 30-8-25w	Drlg. 1,915 ft.
Carson and others' No. 1 Danby, SW cor. SE NE Sec. 20-8-22w	Drlg. 1,445 ft.
Pfeiffel and others' No. 1-A Carter, NE cor. NE Sec. 35-9-22w	Shut down 1,500 ft.
Day Oil Co.'s No. 1 Ault, NW cor. NW Sec. 33-8-21w	Abandoned 1,515 ft.

BLAINE COUNTY

Lowen and others' No. 1 Unknown, NW cor. SW NW Sec. 27-16-11w	Spudded and shut down; renewing leases.
Washoma Oil Co. and others' No. 1 Phillips, C NW SW Sec. 13-19-10w	Drlg. 740 ft.

CADDO COUNTY

J. B. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w	Shut down 150 ft.
W. J. Hartley's No. 1 Galbreath, SE cor. NW SE Sec. 29-5-12w	Shut down 3,394 ft.

CLEVELAND COUNTY

Daniels & LeWright's No. 1 Vandever, C SW Sec. 15-7-1w	Shut down 3,130 ft.
Phillips Pet. and T. B. Slick's No. 1 Hentleman, NE cor. NE Sec. 8-10-2w	Moving in rotary tools 5,585 ft.

COAL COUNTY

Indian Territory Illuminating Oil Co.'s No. 1 Harris, SE NE Sec. 10-1-11e	Shut down 1,975 ft.
W. E. McGraw's No. 1 King, C SW NE Sec. 11-1-8e.	Rig.
Indian Territory Illuminating Oil Co.'s No. 1 Cook, SW cor. NW Sec. 10-1-11	Drlg. 7,045 ft.
Robert Galbreath and others' No. 1 Jones, SW cor. SE Sec. 24-1-9	Fishing 3,350 ft.
J. S. Cosden's No. 1 Richardson, NW cor. NE NE Sec. 6-2-8	Drlg. 1,855 ft.
McGinley & Sigler's No. 1 Willsey, NW cor. SE SE Sec. 7-2-8	Location.
E. W. Whitney's No. 1 Brown, C SE NE Sec. 10-2-8.	Shut down 202 ft.

COMANCHE COUNTY

Birdwell et al's No. 1 Means, SE cor. SW SW Sec. 24-1-11w	Rig.
Green and others' No. 1 Wilson, C NE SW Sec. 14-1-12w.	Shut down 4,055 ft.

CUSTER COUNTY

W. E. Witt's No. 1 Wellman, C SE Sec. 1-14-14w.	Rig and tools.

DEWEY COUNTY

Huckaby & McCoy's No. 1 Perfect, NE cor. NE Sec. 9-18-15w	Shut down 4,500 ft.

(Continued on Page 88)

Why reciprocating HOT OIL PUMPS

In the testing of pumps for capacity, various types of meters, such as the Pitot tube, the Venturi, or a Weir, may be used.

In discussing the accuracy of meters no less an authority than Mr. C. A. Hague has said:

"It is generally conceded by disinterested people that in a properly designed and constructed displacement pump, the plunger displacement will give closer results, in a matter where perfection is impossible, than any other method."

And they do say, "The opinion of an expert is always desirable."

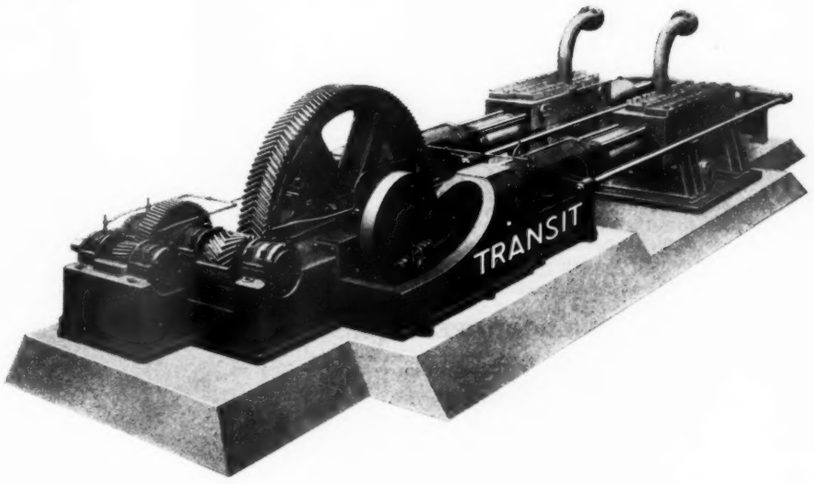

Fig. 1916
TRANSIT Horizontal Duplex End Packed Plunger Hot Oil Power Pump, with double reduction gearing for internal combustion engine or motor drive.

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Kansas Is Getting Big Wildcat Play

Best Financed and Most Intensive Operating Program in the State's History Being Pursued This Year. Promising New Areas

By W. A. Spinney
Staff Correspondent, Kansas Fields

In all the years in which oil has been sought in Kansas, and the search dates back to the Civil War period, it is doubtful if ever so large an area was being covered by wildcat operations as in 1929. It is certain that no such wildcatting campaign was ever so well financed as that of this year when lessees have been busy all the way westward to the Colorado line and deep tests have been started which will not be finished until oil or gas is found in paying quantity or the holes have gone to a hopeless depth.

The production of Kansas is around 113,000 bbls. a day. This is higher than last year's average which was 104,237 bbls. a day with a "high" for one month of 113,742 bbls. in May. The peak is expected to break all past records before the year is up. There is no conservation in Kansas and no attention is being paid to the fact that there is an overproduction of crude in the United States.

There are 467 wells drilling, while at the same time last year only 273 drilling operations were recorded. Oil and gas is showing in widely scattered counties in the western side of the State where oil never showed in the past. Kansas is in for a big year of development and may uncover a number of important pools.

Sedgwick County leads the State in operations and production. There are 80 drilling wells in the county and the 60 completed wells are making around 30,000 bbls. a day. The discovery well was drilled in last August and is still making better than 1,000 bbls. daily. Because of the presence of so many small tracts it necessitates the drilling of more wells than it ordinarily would in the big producing area of the county.

The recently completed wildcat of the Gypsy Oil Co., No. 1 Williams, in the SE SW Section 16-35-3w, Sumner County, near the town of Caldwell, Kans., which was drilled in a few weeks ago and pinched in to about 400 bbls. a day, was opened up last week and started flowing at the rate of 1,000 bbls. a day. It was deepened last Thursday and a big increase was noted in the production. The Wilcox sand was at 4,770-82 feet before the company drilled it 2 feet deeper, making the total depth now 4,784 feet. The gauge for the first 24 hours after deepening was 1,710 bbls. The second day's production was 1,900 bbls. The oil tests 47.5 gravity at 60 degrees.

The well is at least 20 miles from any big production and will open up a lot of drilling in the vicinity. The Gypsy owns all the offset acreage.

Showings in Ness County

The Barnsdall Oil Co.'s No. 1 Lauk, C SW, Section 35-18-21w, Ness County, near the town of Bazine, topped a formation at 4,177-80 feet where it filled up 1,000 feet with fluid. After bailing for some time the crew found 200 feet of water still in the hole and they estimated it had produced 24 bbls. of oil the first day's test.

East of the above well in Rush County, Danciger Oil & Refining Co. discovered a new gas field northeast of Bison, Kans., late in 1928.

Western Kansas has been getting a lease play that has extended to the Colorado state line. Great blocks of leases have been taken all over the western part of the State and extending into northwestern Kansas also. Phillips Petroleum Co. is starting a wildcat well just over the state line in Colorado near the town of Wray.

Stevens County in the southwestern part of the State was pioneered by W. K. McKalb of Wingfield and others who found a rich gas field that may later be developed into an oil area. The gas from these wells is now being sold for commercial purposes.

Coming east into Clark County, the Watchorn Oil Co. prospected successfully, and found a large gas area that is almost a mile deep to the producing horizon. The deep tests that found gas are in the district between Protection and Ashland.

Barber County, the area where the Barbara Oil & Gas Co. drilled in several big gas wells, looks very favorable for the oil operator, especially so since the Gypsy Oil Co. opened its new well in the southern part of Sumner County.

Phillips Petroleum Co.'s two wells in Ellis County are considered by that company to be of great value owing to their location. These two wildcat wells are on a large block of leases that this company controls and are 3 miles apart. They were estimated to be good for 250 bbls. a day when drilled into the Gorham pay some time ago. They are both shut in awaiting pipe line connections.

Prominent among the counties that are being prospected, but which are yet without production are Lane, Pratt, Kingman, Harper, Reno, Saline, Dickerson, Rooks, Osborne, Stafford and Rice.

Marion County reports another well in the Davis Pool, Tidal Oil Co.'s No. 1 Ewert, NW cor. SW SW Section 7-19-3e. It had the top of the pay at 2,841-60 feet. About 1,000 feet of oil came into the hole and after swabbing 15 hours it produced 160 bbls. The production in this pool has been identified as the Simpson dolomite.

Another wildcat test will be started in Lyons County, by Staats & Spencer. It is to be located in the SW cor. Section 33-21-10e. Unless production is found in some of the shallower sands the test will be carried on the top of the lime. The same operators recently completed a dry hole in the NE SE Section 5-22-11e, same county, in which they picked up a strong showing of oil in the Bartlesville sand.

Production in Edwards County

Another wildcat well that is a good many miles from production is the new gas well of the British-American Oil Co. and others in the NE cor. NW, Section 31-25-17w, Edwards County. It is spraying about 35 bbls. of oil a day. The producing horizon has not been definitely identified. It may be a chat, or a sand in the top of the lime. The crew has not been able to get a sample of the cuttings at the well as it is now making around 8,000,000 feet of gas and spraying oil. The total depth is now 4,546 feet. The top of the pay horizon was 4,545 feet. The well has about 130 feet of open hole that will be cased off with a liner and drilling may be resumed the latter part of the week.

M. M. Valerius, a Tulsa geologist, located the well on a block of acreage that he had assembled after locating the structure. M. M. Valerius also opened up the Russell Pool in Russell County, in 1925.

About 10 miles west of this test the Amerada Petroleum Corp. and Wilcox Oil & Gas Co. are drilling a well at 5,045 feet with nothing showing. It is their No. 1 Tansil, NW cor., Section 32-25-19w, Edwards County.

One of the latest wildcat wells to find oil is on the edge of Wichita where the local people have visions of rigs towering above their homes. The well is Blankenship Petroleum Co. and Washoma Oil Co.'s No. 1 Tuttle, SW NW, Section 1-27-1e, Sedgwick County. The showing was encountered at 2,992 feet where it is estimated to be good for 50 bbls. a day. Owing to the small oil showing in the chat the owners are rigging up to drill deeper where they expect to test out the Simpson.

Dickey, Shawver and Shell Petroleum Corp.'s No. 1 Robbins, Section 21-28-1e, Sedgwick County, has increased its flow from 500 bbls. a day to 800 bbls. a day. The increase is attributed to deeper drilling. They had the pay at 3,092-3,100 feet. There are three offsets drilling to the above well, one by the Shell, another by Dickey, the Third by White Eagle Refining Co.

Phillips Petroleum Co. has announced a new location for a wildcat to be drilled in Smith County, which is north of Osborne County, where the recent strike of the British American Oil Co. is causing a lot of excitement. The test is on a block of 20,000 acres and will be known as No. 1 Clydesale, SE cor., Section 23-5-14w, also on a core drilled structure.

Sedgwick County Production

The production by companies and leases in the Sedgwick County area for May 9 is shown by the following table:

Company, farm—	S-T-R	Wells	Bbls.
Aladdin:			
Bennington	6-26-1	1	663
Allison & Fitzwilliams:			
Kelly	6-26-1	1	5
Barnsdall:			
Samuel	24-25-1	1	49
Bu-Vi-Bar:			
Branch	6-26-1	2	1,396
Bright (A)	6-26-1	1	201
Bright (B)	6-26-1	1	949
Byers	7-26-1	1	239
Emrich	6-26-1	2	603
T. Goodrich	6-26-1	4	732
Lantz	12-26-1w	1	795
Lyons	7-26-1	3	2,812
Roll	7-26-1	1	401
Shawver	7-26-1	4	4,888
Wright	12-26-1w	3	4,251
Davis-Skelly:			
Wilson	1-26-1w	5	829
Derby:			
Bowling	6-26-1e	1	475
Gorman	6-26-1e	1	688
Dickey et al:			
Robbins	21-28-1	1	766
Marland:			
Goodrich	16-25-1	2	1,905
Mary Jane:			
Fitch	6-26-1	4	1,290
Montour:			
Lavender	6-26-1	2	1,629
Phillips:			
Dufford	1-26-1w	3	296
Plefer	6-26-1e	1	192
Prairie:			
Cross	27-25-1w	1	196
Swyser	36-25-1w	3	344
Pyle-Sutter:			
Caldwell	6-26-1e	2	885
Reynolds-Hays:			
Roll	7-26-1	1	233
Stearns-Streeter:			
Roll	7-26-1	1	510
Tidal:			
Scherger	6-26-1	2	251
Vickers:			
Nessen	6-26-1	2	758
White Eagle:			
Baylor	6-26-1	1	44
Shell:			
Lygrisse	15-26-2	1	1,420
Patton & Wentz:			
Swenson	6-26-2	1	316
Total		59	31,066

The Shell Petroleum Corp.'s No. 1 Lygrisse, in Section 15-26-2e, produced 1,985 bbls. on May 10 gauge from the pay at 3,164-74 feet. This is the largest day's production the well has made to date.

Butler County

White Eagle Oil & Refining Co. made location for No. 1 Bachelber, SW cor. Section 17-25-3. Empire Oil & Refining Co. has the rig up for No. 1-C Marshall, NE cor. SW SW, Section 11-27-5. The rig is being built for No. 1 Covert, SE cor. SW SE, Section 3-28-5.

Wichita Drilling Co.'s No. 1 Joseph, NE cor. SE NW, Section 18-25-4, is dry and abandoned at 3,415 feet. Empire Oil & Refining Co. and Phillips Petroleum Co.'s No. 1-B Robinson, NW cor. NE,

(Continued on Page 141)

WILDCAT OPERATIONS IN KANSAS

Company, farm and location—	Remarks:
BARBER COUNTY	
Barbara Oil Co.'s No. 1 Angel, NW cor. NE Sec. 14-33-13w	Rig.
Robertson et al's No. 1 Powell, SE cor. SE Sec. 11-32-10w	Rig on ground.
Allison & Fitzwilliams' No. 1 Morrisse, C NW SE SE Sec. 9-30-12w	Drlg. 2,480 ft.
Rolland et al's No. 1 Pickens, NE cor. NW NE Sec. 27-30-14w	Drlg. 4,605 ft.
BARTON COUNTY	
Gobel & Bending's No. 1 Bartlett, SW cor. SW Sec. 28-17-15w	Spudding.
Everett & Wiley's No. 1 Ward, NW cor. SW Sec. 12-20-13w	Shut down 3,948 ft.
Phillips and Shell's No. 1 McClellan, SE cor. SW Sec. 23-26-6e	Drlg. 2,970 ft.
BUTLER COUNTY	
Lilly & Schreck's No. 1 Newton, NE cor. NW NW Sec. 17-25-7	Rig.
Crawford et al's No. 1 Thompson, NW cor. SW Sec. 2-24-3e	Rig.
Aladdin Petroleum Co.'s No. 1 Bronsenger, NE cor. NE SW Sec. 24-27-3	Rigging up.
Shell Petroleum Corp.'s No. 1 Thiesstin, C SE SW SE, Sec. 10-24-3	Drlg. 2,237 ft.
Smith & Ash's No. 1 Donnelly, NE cor. NE Sec. 3-24-6	Shut down 2,215 ft.
CHASE COUNTY	
Marland Prod. Co.'s No. 1 fee, SW NE Sec. 8-21-8e	Drlg. 1,450 ft.
CLAY COUNTY	
Gray et al's No. 1 Smith, NE SE Sec. 30-6-3e	Drlg. 945 ft.
COWLEY COUNTY	
Cameron et al's No. 1 Zirkle, Sec. 35-31-3e	Hole full water 3,345-56 ft.; abandoned.
J. B. Markley's No. 1 Tatum, SE cor. SW Sec. 11-31-6	Shut down 520 ft.
ELLIS COUNTY	
James Brouk's No. 1 Wagner, C SE SE Sec. 35-15-16w	Underreaming 6-in. casing 3,505 ft.; abandoned.
T. C. Johnson's No. 1 Robbins, SW NW Sec. 15-14-16w	Underreaming 1,040 ft.
John Brown's No. 1 Gestner, SE cor. SW NE Sec. 13-13-18w	Shut down 1,600 ft.
Rush Oil Co.'s No. 1 Gatewood, NW cor. NW Sec. 4-15-20w	Shut down 1,600 ft.
Finney & Weiner's No. 1 Freeman, SE cor. SW Sec. 24-15-20w	Spudded and shut down.
Phillips Pet. Co.'s No. 1 Johnson, SW cor. NE Sec. 9-13-19w	Drlg. 2,975 ft.
Phillips Pet. Co.'s No. 1 Dechant, NE SE Sec. 12-13-16w	Drlg. 2,810 ft.
Phillips Pet. Co.'s No. 1 Schneider, NW cor. Sec. 20-12-17w	Drlg. 3,429-39 ft.; 108 bbls. in 8 hrs.; shut down.
Burger et al's No. 1 Hadley, SW cor. SW NW Sec. 20-11-17w	Shut down 50 ft.
John Brown No. 1 Company's No. 1 Gestner, SE cor. SW NE Sec. 13-13-18w	Shut down 1,350 ft.
EDWARDS COUNTY	
Amerada & Wilcox's No. 1 Tesnsil, C NW NW Sec. 32-25-19w	Drlg. 5,045 ft.

(Continued on Page 87)

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1240 DW-4 API-4

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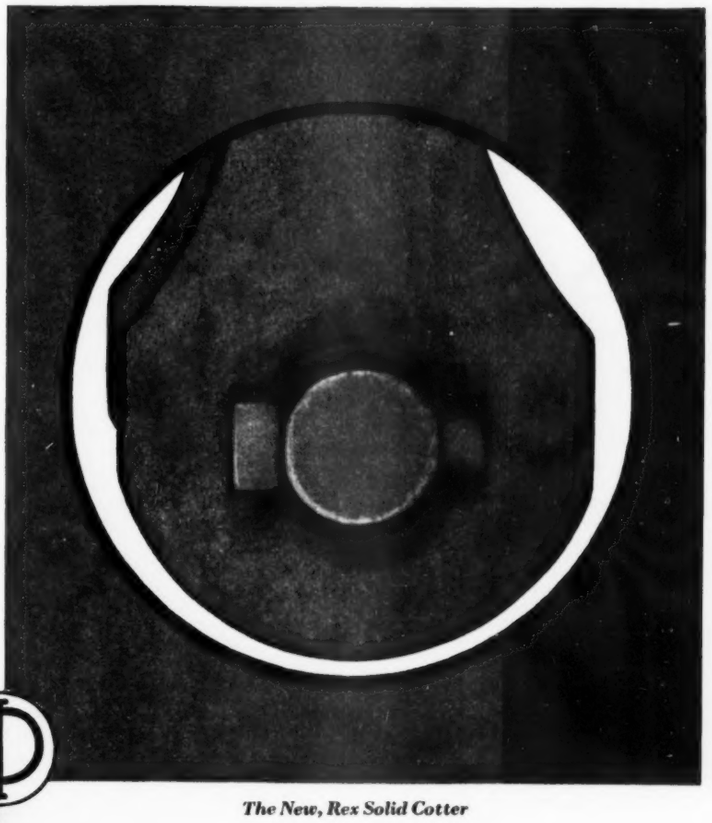
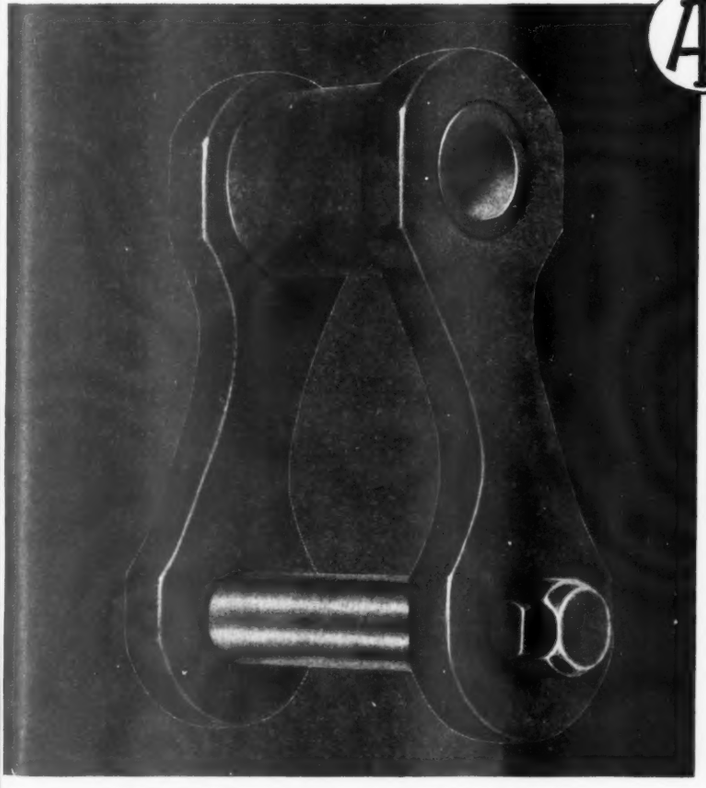


The New, Rex Solid Cotter



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Stocks In All Active Oil Fields

Caddo Parish Well Goes Dead Quickly

Production Seems to Have Beenfrom Pimple. Disappointments in Mount Holly District of Arkansas. Production Declines

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., May 13.—The fourth day after it had been listed as a 300-bbl. initial producer, D.C.R. Oil Co.'s No. 1 Hunter estate in Section 17-19-14, Caddo Parish, went dead. Completion followed sale of the well and approximately 1,000 acres to the Standard Oil Co. of Louisiana, and the well squeezed a "pimple" 4 miles from nearest production northwest. Put on 475 pounds of air, it wouldn't flow, but after getting the fluid started by swabbing, it started off again about 50 to 75 bbls. daily.

Meanwhile, however, Standard Oil Co. has made four locations, Gulf Refining Co. two, and Ohio Oil Co. one, around the well, which, with the two others already drilling, give the Dixie district a total of nine tests under way. The new locations are: Gulf Refining Co.'s No. 1 Oden, 330 feet south and 220 feet west NE cor. 18-19-14, and No. 2 Oden, 990 feet south and 300 feet west NE cor. same section; Ohio Oil Co.'s No. 1 Hunter estate, 330 feet north and east SW cor. NE NW Section 17-19-14, is a derrick; Standard Oil Co.'s No. 1 Henderson, 330 feet north and west SE cor. Section 7-19-14 and No. 2 Hunter estate, 330 feet north and 270 feet east SW cor. SE SW Section 8-19-14, are derricks, and No. 3 Hunter estate, 330 feet south and east NW cor. SE NW Section 17-19-14, and No. 1 Oden, 330 feet south and east NE cor. SE NE Section 18-19-14, are locations. Lide and others, drilling No. 1 Glassell in the SW SW Section 1-19-15, topped the Blossom at 1,840 feet and was drilling at 1,900 feet. Root Refineries' No. 1 Liederman, NE NE Section 12-19-15, was fishing for bit at 1,500 feet.

Three wells in other proven districts of Caddo were failures. J. O. A. Carper's No. 2 Hammock, Section 34-18-16, Greenwood, was dry at 920 feet. W. D. Chew decided not to drill No. 1-B Fee, Section 33-21-16, Oil City, after getting down to surface casing depth and L. M. Emlet's No. 9 Glassell, Section 10-20-15, Oil City, which has been listed as waiting for air lift since November, was dropped from the list as a salt water hole, total depth 2,240 feet.

Dixie Oil Co. cemented 4½-inch casing at 6,104 feet on No. 92 Dillon, Section 13-21-15, and was scheduled to drill plug and test. Falcon Oil Co.'s No. 1-B Muslow, Section 29-20-15, Mooringsport district, is waiting for standard rig to pump with the bottom in 13 feet of broken sand, total depth 2,302 feet.

Mount Holly Disappointments

Things looked rather discouraging in the Mount Holly district of Ouachita County, Arkansas, this week when the district's fifth and sixth completions were failures. Cumberland Oil Co.'s No. 1 Burton in the SE NE Section 24-15-18, about a mile and a quarter east of the discovery well, got salt water at 2,870 feet and was abandoned after making 14 feet more hole. Between it and the discovery well is Atlantic Oil Producing Co. and E. M. Jones' No. 1 Allen in Section 25, which was abandoned at 3,136 feet after going on past a salt water test at 2,806 feet, the depth at which the discovery well of which it is an offset got the oil. McDonald Brothers' No. 2-B Wilson, also in Section 25, tested salt water at 2,906 feet and was abandoned. It also is an offset to the discovery. Magnolia Petroleum Co.'s No. 1 Wilson, south of the discovery but in the same section, also has failed to find the pay at the expected depth and is coring below 3,173 feet, at which they tried but failed to get a drill stem test. Root Refineries' No. 1 Wilson, in the same section, swabbed dry at 2,841-44 feet and filled up 1,900 feet in fluid after standing for 24 hours; cored sand, shale and shell to 2,855 feet, plugged back to 2,845 feet and is building standard rig to pump.

Magnolia's troubles with the Wilson well were compensated for somewhat by the success of No. 6 Marshall, Section 21-21-10, Cotton Valley district of Webster Parish, completed in the deep pay at 4,652 feet, 8 feet of sand, making 42,000,000 feet of gas at 1,600 pounds; and No. 1 Fee, Section 14-18-4 Ouachita Parish in the Monroe district, which gauged 2,000,000 feet of gas at 840 pounds, total depth 2,220 feet. There were two other completions in the Monroe district, both in Ouachita; Maury Drilling Co.'s No. 5 McEwen, Section 29-19-4, 3,500,000 feet of gas at 880 pounds, total depth 2,196 feet, and Nemours Corp.'s No. 2 Frierson, Section 18-19-4, 4,000,000 feet, total depth 2,192 feet. Magnolia's No. 1 Adkins, Section 4-22-9, Shongaloo district of Webster Parish, cored sand showing oil at 2,662 feet and No. 1 McCook & Hibbler, Section 22-21-10, Cotton Valley, cored shale at 5,270 feet. No. 1 Kelly, Section 9-17-14, Champagnolle district of Union County, Arkansas, gauged 3,000,000 feet, total depth 2,822 feet.

Zwolle District Well

R. L. Gay has another producer in the Zwolle district of Sabine Parish, which, while small, will probably do better on final completion. No. 3 Bowman-Hicks, Section 14-7-14, choked up and wouldn't do more than 15 bbls. through tubing from a broken sand from 2,140-78 feet, so he is pulling tubing to wash and reset. No. 2 Bowman-Hicks in the same section claimed a show of oil at 3,569 feet, but the drill stem test was dry with a little salt water. Arkansas Natural Gas Corp.'s No. 13 Logan, Section 33-10-12, Pleasant Hill district of Sabine, will probably be a completion within the next two weeks as it is drilling within striking distance of producing depth but has only surface casing in the hole.

A salt water well in the Elm Grove district of Bossier Parish was not such a failure as it sounds, as salt water was what C. W. Jones was after in drilling No. 1 McDade in Section 31-16-11. He had a show of gas that would have made a well, if gas had been what he was after, at 1,887-1,915 feet, and passed it as a disappointment, and was disappointed again when a second test at 2,452 feet was dry. Jones, who came here last year from Michigan, is engaged in experimental work on oil field brines in this division. The Bull Bayou district of Red River Parish reported a small producer in Odell & Lawton's No. 4 Richardson in Section 25-13-11, which is pumping 15 bbls. from 2,556 feet. R. L. Gay abandoned No. 1 Sabine Lumber Co., Section 13-7-4, Zwolle district, as a dry hole at 2,936 feet.

In East Texas C. H. Lyons' No. 1 State Line Oil & Gas Co.-Furrh in the Joel Lipscomb Survey of Harrison County (Waskom district) made 2,000,000 feet of gas, total depth 2,366 feet, and in Panola County, Natural Gas Producing Co. completed No. 4 Floyd, B. C. Jordan Survey, making 2,000,000 feet from a total depth of 946 feet.

Daily average runs from the field in this division took another slump this week after remaining stationary for a period of about two weeks, the total shipments of 106,580 bbls. being 1,400 less than was moved the week before. Louisiana runs averaging 35,355 bbls. were only 95 under last week's figure, a decline of 780 bbls. from Champagnolle and 285 in the Smackover heavy oil shipments and 135 from Nevada County being the principal factors in Arkansas' 1,305-bbl. drop. A decline of 140 bbls. in Caddo light oil runs backed up by smaller differences in other Louisiana districts was offset by an increase of 310 bbls. in movement of Urania crude, reflecting the recent advance and small gains in Pleasant Hill and Caddo heavy. Runs from the several pools during the week averaged as follows:

Louisiana

Caddo, light	8,123
Caddo, heavy	3,240
Homer	4,000
Haynesville	5,337
DeSoto-Red River	3,840
Elm Grove	590
Bellevue	637
Cotton Valley	2,810
Urania	6,670
Pleasant Hill	480
Sarepta-Cartersville	225
Total	35,355

Arkansas

El Dorado	4,640
Smackover, light	6,195
Smackover, heavy	48,823
Stephens	1,000
Nevada County	1,077
Lisbon	1,310
Champagnolle	8,080
Bradley	100
Total	71,225
Both states	106,580
Last week	107,980
Decrease	1,400

NORTH LOUISIANA

Bossier Parish

Woodley Petroleum Co. is bailing No. 4 Whitehurst, Section 35-16-12, for a test, total depth 1,906 feet.

Caddo Parish

Dixie District—Gulf Refining Co. has derrick patterns on location for No. 1 Oden, 220 feet west and 330 feet south NE cor. Section 18-19-14, and for No. 2 Oden, 900 feet south and 300 feet west NE cor. same section. Ohio Oil Co. made location 330 feet north and east SW cor. NE NW Section 17-19-14, for No. 1 Hunter estate. Root Refineries' No. 1 Liebman, Section 12-19-15, is fishing for bit, total depth 1,500 feet. Standard Oil Co. has derrick up for No. 1 Henderson, 320 feet north and west SE cor. SE NW, Section 7-19-14, and for No. 2 Hunter, 330 feet north and 270 feet east SW cor. SE SW Section 8-19-14, and made locations for No. 3 Hunter, 330 feet south and east NW cor. SE NW Section 17-19-14, and for No. 1 P. W. and P. D. Oden, 330 feet south and west NE cor. SE NE, Section 18-19-14.

Mooringsport—Falcon Drilling Co.'s

(Continued on Page 127)

RANKIN COUNTY, MISSISSIPPI, WILDCAT NOW ATTRACTS ATTENTION

By D. H. Bancroft

SHREVEPORT, La., May 13.—With Lion Oil Refining Co.'s No. 1 Misterfeldt in Section 2-4n-1e, Rankin County, as the occasion, Mississippi makes the headlines for this division this week. There is more or less debate among geologists whether the lime found at 3,064 feet is the Ripley (Nacatoch) or the Midway. Some claim one, some the other, and there is some identification of it as the Monroe gas rock. Top of the red beds was found at 3,502 feet and it is drilling sand and shale at 3,515 feet. The section from the lime is very similar to that of eastern Louisiana. Whereupon the interest with which this well is regarded has become more intense.

R. L. Steffy, who is issuing a weekly report on Mississippi and Alabama activities, says in his latest bulletin that the geologists studying the well's log have been unable to make up their minds what the well had encountered at 3,064 feet because of the presence of "stranger" fossils and the absence of foraminifera with which they are acquainted and by which the formation could be identified.

In the Amory district of Monroe County Mississippi, Arkansas Natural Gas Corp. was unable to land 5⅝-inch casing at around 3,376 feet and pulled it to ream a bulge that developed close to the bottom. Amory Petroleum's Co. No. 1 Hall, Section 8-13-19, is making a little gas with the bottom in lime at 2,999 feet and, running high in comparison with other older wells nearby, is expected to tell its tale within the next few feet. Amory Natural Gas Co.'s No. 2 Carter in Section 7-13-17, is in a white sand and has a small amount of gas at 3,015 feet. A recently discovered log of the discovery gas well, No. 1 Carter, drilled by the old Amory company, agrees with formations and depths encountered in drilling No. 2 Carter whereas previously published information did not.

Park Bowser, drilling No. 1 Cowart, in Section 2-12-19, is arranging to drive 230 feet of 12½-inch. Amory Development Co. is fishing for casing run recently to test a gas show. Ben W. White and others' No. 1 Old Hen, Section 36-10-4, Claiborne County, had a fishing job at 1,970 feet. The Reeder well, No. 1 State, in Section 25-6-1, Hinds County, is shut down at 2,675 feet after making a few feet more mole following a little dead oil. Lauderdale Oil & Gas Co. is probably rigging up by this time on No. 1 Lackey in Section 2-7-16, Laudersale County (Meridian district), and F. X. Gowans' No. 1 Hauser in Section 33-8-18, is shut down at 1,300 feet while title to some of his acreage is being straightened out. Hennessey and others have built a new derrick and rigged up on No. 1 Riverdale, Section 23-16-5, Hinds County, replacing the ones destroyed in a storm some time ago when they had drilled to 535 feet.

Alabama Operations

Briggs & Knapp, drilling No. 1 Wefel, Section 25-12-14, Lamar County, Alabama, east of Monroe, Miss., are last reported as drilling at around 375 feet. In the southeastern part of the state, Creer and others' No. 1 Long-Bell in Section 28-10-4, Choctaw County, was drilling black shale at 3,744 feet, leaving the Selma chalk at 3,690 feet. This formation was topped at 2,598 feet. S. R. Hobson has refinanced his Washington County wells to 1,700 feet; No. 1 Wilson, Section 27-7-1, Washington County, is underreaming at 537 feet to reset 8-inch at 700 feet and No. 1 fee, Section 9-8-2, is arranging to set 8-inch at 312 feet to stop caving, total depth 325 feet.

Several wildcats carried on the reports

(Continued on Page 124)

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Refugio Oil Field More Promising

Completion of Good Gas Well at Pettus in Northern Bee County Increases Hope of Opening New Areas There

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., May 13.—Another big oil well in the Refugio Field in the 3,700-foot sand and the probability that before the week is out still another one will be in has added very materially to the importance of that proposition as an oil field. Several weeks ago in The Oil and Gas Journal it was pointed out that over a territory more than 3 miles long and over a mile wide there was one oil well at the north end and several at the south furnishing length to the field and wells east and west giving it width. Late last week Mission Drilling Co. tested its No. 1 Fox on the east side of the field in sand at 3,636-45 feet and got gas but worked with the proposition and late Thursday night it came in making at the rate of about 750 bbls. of oil. This is a little shallower than any oil well in the field. Oigufer's No. 1 Ryals previously reported to The Oil and Gas Journal came in at first as gas at about that depth but was deepened and has since been making about 500 bbls. of oil a day. No. 1 Fox is a quarter mile northeast of No. 1 Ryals. The next well and the all important well is the Houston Gulf Gas Co.'s No. 7 Shelly in the center of the field. Others producing at 3,700 feet or at about that depth are all around the edge. No. 7 Shelly is in the middle of the field at a total depth of 3,704 feet and casing was set early last week. It will probably drill in some time this week, that field usually allowing 10 days or more for cement to set. It looks favorable for oil. The dozen oil producers at around 3,700 feet have a potential production of around 5,000 bbls. of oil and Houston Oil Co. is rushing work on two 55,000-bbl. tanks for a tank farm and William F. Morgan has one 55,000-bbl. tank nearly completed and will lay a 6-inch line to Corpus Christi. Crude from the Refugio Field is now being shipped by rail to Ingleside and stored there in the Humble tanks.

Pettus Gas Field

As important as anything during the week was the completion of the Mission Drilling Co.'s No. 2 Ray at Pettus in northern Bee County at 2,890 feet, a nice big gas well with 650 pounds rock pressure while there was still a lot of mud in the hole and with a likelihood that when thoroughly cleaned out it will make a 50,000,000-foot gas well. The well is 30 miles north and a little east of the Houston Oil Co.'s Cartwright Field in the lower part of Live Oak County and 30 miles east of the Three Rivers gas but other than this it is 60 miles from any production, being in the center of a vast area in which there has been a little wildcat drilling but which has never been given very much attention. With production there the structural conditions of the county would naturally indicate there will be more gas areas and possibly and probably oil areas opened up.

Dr. H. E. Hewitt and associates drilled No. 1 Ray some months ago. It at first made only a little gas. The pressure would build up if the well was closed in but soon exhausted itself. It was opened periodically and kept improving until it got up to around 20,000,000 feet. Then it was sold to the Moody-Seagraves interests and Mission Drilling Co. has now completed the second well which indicates beyond doubt there is a field there. Moody Seagraves interests have a projected line that will run about 10 miles east of the well and a line already in operation 30 miles west. The new field is located fairly close to the Reynosa escarpment, near which the production in the Laredo district is located and with a gap of considerable proportions between them on which there is no developed production. Texas University Bulletin No. 2645 on the Gueydon formation covers a territory with reference to which this new field is located just to the east.

Kingsville Field

In the Kingsville Field the Humble Oil & Refining Co.'s No. 4 Flato at 5,674 feet bailed dry and is drilling deeper. It tested a little 40 gravity oil. About a gallon or more was bailed out. The screen has since been milled out and the hole is being deepened and if nothing prevents it will drill to 7,000 feet. There is some disappointment that the well didn't make a producer, but geologists are looking on the fact that it tested a little oil as very important for the Gulf Coast. Also it added to the geological information on the country by furnishing enough oil to permit of testing the gravity and showing that the formations there are petroliferous, at these lower depths.

Laredo District

Important developments in the Mirando of Laredo district last week were R. O. Barnsley's No. 1 fee in Block 15, Survey 268, in the Carolina-Texas gas field, which blew in at 2,100-09 feet estimated at 60,000,000 feet of gas. It blew off all the fittings except the master valve. It is on the east edge of the developed portion of the field and is the first big gas well brought in for some time in that field where there has been very little drilling. The sand is called the upper sand and is the same that produced in another big well in the field some years ago.

Other completions in the Laredo district were of considerable interest also. O. W. Killam got a 40,000,000-foot gas well in his No. 9 Bruni at Bruni station, around which locality he has been drilling for some time trying to find some oil. The well came in at 2,346 feet. In the Kohler oil pool Humble Oil & Refining Co. and Reiter-Foster got a 15-bbl. well in their No. 15 in the NE cor. of Survey 401, which corners on Survey 400, in the SW cor. of which there are three oil wells of small caliber at about the same depth, around 2,765 feet.

In the Schoolfield-O'Byrne Pool in northwestern Duval County S. & O. Oil Co. got 2,000,000 feet of gas in its No. 2 Hahl; Onyx Petroleum Co. got 2,000,000 feet of gas and 10 bbls. of oil in its No. 5 Krauter, and The Texas Company got a 75-bbl. well in its No. 3 Hahl, depths being around 2,350 to 2,360 feet, in the regular sand. The wells are all together in the same part of the field and in as much as the gas wells have oil on both sides of them they may both change to oil before they are much older.

Driscoll Pool

An item of more than ordinary importance is that the Driscoll No. 15 fee, reported last week as in and flowing 300 bbls. of fluid, 10 per cent water, has increased to 560 bbls. pipe line oil free from water. It is the second oil well completed in the pool, which consists otherwise of a few gas wells, but in an upper sand at about 2,465 feet, whereas the two oil wells are producing at about 2,899 feet. The other oil well, No. 14, is flowing about 180 bbls. a day and the two wells are only a couple of locations apart. Wildcatters are not overlooking the importance of these two oil wells, for they not only open a new oil pool but they open a new section of the country. The Laredo Pool lies in strings more or less north and south. The Driscoll Pool is 10 miles east of the nearest production and now all the territory north and south of it for a distance of 30 or 40 miles has possibilities.

Joe Bruner Field

Interest in the Joe Bruner Field the past week centers more in a number of locations than have been made northeast of the nearest production and in the general line that the field has been taking. Humble Oil & Refining Co.'s No. 1 Trap Briscoe, with casing set and total depth 2,757 feet, is waiting on cement. It is one location north of the nearest production in the field. The new locations, however, are quite some distance in advance of the nearest production and in totally untested territory. They will probably have something to tell in the course of about three or four weeks.

Albercas Pool

The Albercas Pool in the Laredo district has been quiet for several weeks, due to the fact that the Sun and Rycade going south and offsetting each other down a line fence reached the end of their lease and had to stop. George S. Marshall last week made two locations, one in the NW and the other in the SW cor. of Block 10, Survey 15 of the Holbien ranch in Share No. 3. The most northerly of the locations is about 800 feet south of the last Sun and Rycade producers. The south end of the field thus far is a double row of derricks. Marshall is liable to extend the field down till it merges into his gas and oil production at the north end of the Henne. Winch & Fariss Pool.

COMPLETIONS

Caldwell County

Gulf Production Co.'s No. 1 J. L. Northcutt completed 2,682 feet for 1,037 bbls. first 17 hours.

Gulf Production Co.'s No. 8 J. D. Wright, Gerren Hinds Survey, completed 2,673 feet, pumping, no gauge given.

Gulf Production Co.'s No. 10 R. W. Carter, Gerren Hinds Survey, completed 2,665 feet, on pump, no gauge.

Humble Oil & Refining Co.'s No. 1 Tom Tiller completed 2,661 feet, making 1,530 bbls., flowing.

Humble Oil & Refining Co.'s test on the B. T. Hinds tract came in flowing 90 bbls. an hour.

Shell Petroleum Corp.'s No. 2 New, James Hinds Survey, completed 2,741 feet making 171 bbls., after being shot increased to 500 bbls. and no water which showed before.

Shell Petroleum Corp.'s No. 1 C. F. Dye completed making 30 bbls. an hour and is steadily increasing its output.

Duval County

Onyx Oil Co.'s No. 5 Hahl, Survey 250, Block 20, completed 2,360 feet making 2,000,000 feet of gas and spraying out 10 bbls. of oil.

The Texas Company's No. 3 Hahl, Survey 250, Block 10, completed 2,350 feet for 75 bbls.

S. & O. Oil Co.'s No. 2 Hahl, Survey 250, Block 23, completed 2,356 feet for 2,000,000 feet of gas.

Humble Oil & Refining Co.'s No. 15 Kohler, Survey 401, completed 2,768 feet for 15 bbls. daily.

Webb County

R. O. Barnsley's No. 1 Barnsley, Survey 268, Block 15, completed 2,109 feet

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SHOW IN SOUTHERN GONZALES; PLAY AROUND NEW DUVAL POOL

By B. D. Stevenson

SAN ANTONIO, Tex., May 13.—Crown Petroleum Co.'s No. 1 Hattenbach in southern Gonzales County, drilling at 1,400 feet, has had two showings of gas and oil, one at about 600 feet and the other at about 1,120 feet. The well is near Nopal and on what many call the Nopal structure. Several thousand acres are under lease covering the structure. Nopal is just over the line in DeWitt County. There are several interesting features about the test. One of these is that it is in the area covered by the map in State University Bulletin No. 2,-645 on the Gueydan formation that marks in a way the Reynosa Escarpment coming up from the Mirando fields. The university bulletin indicates a faulted condition in that area. Another thing about the test is that it is the first on that structure. The test is now getting down to the formations where it has a chance to pay off and the slight showings it has had helps to strengthen the proof that it is on structure.

New Pool in Duval

Bringing in of the Driscoll No. 15 fee in the new pool in Duval County is practically sure to start some wildcatting north and south of it. Pools in the Laredo district lie in chains north and south and ever since Driscoll got his first gas production on his ranch geologists have agreed that there is a chance for more production in other spots north and south of it. The Driscoll Pool is 10 miles east of the nearest line of production which is the Cole gas field and the Humble-Reiter-Foster production north of that. There is at this time no wildcatting north or south of Driscoll though south in Jim Hogg County L. M. Holden has a test standing and in other tests near it he had showings of oil in real sands and in sands that were thicker than in many of the producing fields to the west.

Inevitably a lot of wildcatting follows the opening of every new pool. Bringing in of No. 2 Ray at Pettus which has built up to a rock pressure of 1,200 pounds at 2,890 feet is sure to start renewed interest and attract new attention to a great scope of territory that at present is not being tickled with the drill. It means a line of wildcat activity up along the northwest line of Goliad County and the southeast lines of Karnes and DeWitt Counties which is about the trend of the Reynosa Escarpment and the trend of structures in that territory, nearly northeast and southwest. To the southwest in Live Oak County and 30 miles away there is additional gas production.

Northwest Duval

William F. Morgan last week abandoned his No. 1 Welder-Woods in Duval County, several miles north and a little east of the Schoolfield-O'Byrne Pool, abandoning it at 2,757 feet as dry. He has a year in which to start another test. There is believed to be a structure there but the first location was probably a little too far west.

Maverick County

There is due in northwest Maverick County some additional drilling and some of it in a territory heretofore untouched. Humble Oil & Refining Co. has leased a block of 18,695 acres known as the Burr ranch and The Texas Company has leased a big block from I. N. Boicourt, the tract being known as the Bandera

(Continued on Page 129)

Find New Salt Dome in Orange County

Comparatively Shallow Operation Producing Grade A Oil. Black Bayou Well Uncertain. Both Spur Exploration

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., May 13. — Another entirely new salt dome field apparently has been opened in the Gulf Coast with the completion last Thursday of a 1,900-bbl. wildcat in the southwestern part of Orange County. The well, The Texas Company's No. 1 Kuhn, Mary E. Hall Survey, Saturday was flowing at the rate of 1,500 bbls. pinched in through a half-inch choke. At the same time, Shell Petroleum Corp. brought in its first deep producer on the Black Bayou Dome, Cameron Parish, just across the line in southern Louisiana, but at this writing the commercial status of the latter wildcat is problematical as the well is making a large amount of salt water. This also is the first well on that dome although a shallow test swabbed some oil several weeks ago. The latter, however, did not indicate commercial possibilities and was expected to be abandoned although now it is being rigged up to pump and may make a small well.

The Texas Company's find in southwestern Orange County is regarded as one of the most significant in Gulf Coast developments within the past year, possibly since the opening of the DeWalt Dome Field in Fort Bend County in March, 1928. The well came in flowing 1,013 bbls. of pipe line oil in the first 15 hours but after that period had to be pinched in as the storage tanks provided began to settle in the marsh and the well had to be held in to the capacity of a 2½-inch pipe line which had been laid to supply fuel. This line makes connection with the Texas Pipe Line Co.'s main line less than 3,000 feet distant.

Comparatively Shallow

The comparatively shallow sand, total depth at 3,162 feet, is one of the favorable points for the new field and the oil checked 21.4 gravity (corrected) and is rated as Grade A, which would make this field one of the few of the newer fields to produce this original Coastal crude. One joint of 4¾-inch strainer was set in the hole and the well came in without bailing and cleaned itself rapidly.

This is the first test drilled on this salt dome, which is a seismograph discovery of the past year. The dome prospect lies in the marshes from 2 to 3 miles east of the Neches River and Port Neches, Jefferson County, which is approximately 4 miles east of the famous Spindletop Field and a few miles west of the Orange Field. The location is accessible only by boat and The Texas Company was forced to dredge a canal to barge in its equipment and supplies. Although all acreage in the immediate vicinity of the wildcat is held by The Texas Company, the Gulf Production Co. and Shell Petroleum Corp. also have considerable holdings as close at 2,500 feet. Shell has 3 different tracts in that area and the Gulf has about 14, the closest being 880 varas (approximately 2,500 feet).

The field is ideally situated for The Texas Company, considering movement of the oil. The company's Port Neches refinery is only a short distance away and its main pipe line from the Orange Field and Louisiana passes almost on top of the dome. The marshy country for miles around, which makes access and also operations difficult, is the only unfavorable point but Gulf Coast operators have become used to those things.

Black Bayou Wildcat

The importance of Shell Petroleum Corp.'s wildcat at Black Bayou is uncertain at this time except for the proving of oil on that dome. The well, No. 6 Watkins, came in flowing initially 60 bbls. of fluid, 75 per cent b.s. and water, hourly, or at the rate of 316 bbls. of oil and 1,124 bbls. of water and sediment daily. This production, however, soon dropped off and Saturday the well was flowing only 30 bbls. of fluid, 75 per cent b.s. and water, hourly. This well, on the north side of the dome, is in a sandy shale at 4,727 feet. One joint of strainer was set. The oil tested 28 gravity and the pressure of the well 90 pounds.

Black Bayou, like Port Neches, is another geophysical dome of 1928's discovery, situated just a few miles from the Texas line (Sabine River) and not more than 25 miles from The Texas Company's new field. Also like Port Neches, it has to be reached only by boat. Shell has drilled 10 tests on this dome, all of them shallow on top of the dome except No. 6. The ninth test, which swabbed some oil for several days from the cap at 981 feet but which would not flow, is to be tried out on the pump. With these two exceptions no other production has been found.

These two discoveries, particularly that of The Texas Company, are expected to start a renewed wave of development activity, both in drilling and geophysical research, over the Coastal territory. This is indicated chiefly in Jefferson and Orange Counties where several of the larger companies have been doing considerable leasing and where several additional dome prospects are believed to have been checked. In the northeastern corner of Orange County, Gulf Production Co. has recently blocked up extensive acreage in the vicinity of some old oil and gas showings. Leasing has been going on in the vicinity of China, Jefferson County, and north of the Fannette Dome, where another dome is believed to exist. Shell Petroleum Corp. is making rapid hole in its new dome test at Hampshire and Vacuum Oil Co. is ready to start drilling on its location in the T.&N.O. Survey No. 208 as soon as a road can be built to the location.

Sweet Lake Development

A late development of the week was the bailing in of Pure Oil Co.'s No. 8 Yount Lee Oil Co. at Sweet Lake, Cameron Parish, Louisiana, as a 40,000,000-foot gas well from the shallower of the two deep sands at 5,657 feet. Two other wildcats on the Coast were having considerable trouble with gas but were due to be tested over the week-end, these being The Texas Company's No. 1 Pipkin, Big Hill, Jefferson County, and the Humble Oil & Refining Co.'s No. 75 Simms-Smith, north of the Goose Creek Field, Harris County. Several efforts have been made to set screen in the Big Hill wildcat but each time the well has tried to blow out. It is at a total depth of 5,900 feet. The Humble wildcat, which is approximately 3,000 feet north of Goose Creek production, is in sand at 4,419 feet.

Somerville District

One of the most active wildcat plays which has sprung up in the Gulf Coast area for some time is in the Somerville district of Washington County and extending over into Burleson County. This is near the Clay Creek Field of the Sun Oil Co., and in that district, not including Clay Creek, a half dozen tests have been started up in the last several weeks, and locations have been made for others.

Also of interest to Coastal operators is that the record for deep holes on the Coast was broken the past week by Yount Lee Oil Co.'s No. 6 Housierre-Latrielle, which Saturday was drilling below 7,130 feet. So far as known, the previous depth record was at Spindletop and was held by a test drilled by the same company below 6,967 feet.

Nearly every field in the Gulf Coast fell off slightly in production during the week which was reflected in the total output of the Coastal area of 5,631 bbls. in the daily average. The daily average for the week ending May 11 was 156,876 bbls. as compared to 162,507 bbls. of the previous week, the latter being the peak for a two-year period. Daily average production in Southwest Texas totaled 74,659 bbls., an increase of 1,520 bbls. Figures for the week were:

GULF COAST PRODUCTION

Texas

	Daily average
Allen	8
Barbers Hill	7,397
Batson	1,394
Big Creek	2,624
Blue Ridge	4,067
Brenham	225
Boling	1,855
Clay Creek	3,445
Damon Mound	625
DeWalt	12,012
Fannette	641
Goose Creek	6,231
High Island	1,324
Hull	8,920
Humble	10,174
Jasper	25
Markham	435
Nash	566
North Dayton	420
Orange	2,988
Orchard	251
Pierce Junction	19,728
Port Neches*	460
Raccoon Bend	3,259
Saratoga	895
Sour Lake	2,708
South Liberty and South Dayton	7,635
Spindletop	30,087
West Columbia	6,446
Total	136,778
Total previous week	141,273
Decrease	4,495

*First production May 9.

South Louisiana

Anse La Butte	50
Bayou Bouillon	228
Black Bayou*	63
Edgerly	857
Jennings	943
Hackberry	6,406
Lockport	3,872
Sorrento	337
Starks	482
Sulphur	2,325
Sweet Lake	365
Vinton	4,125
Welsh	35
Total	20,098
Total previous week	21,234
Decrease	1,136
Total Gulf Coast	156,876
Total previous week	162,507
Decrease	5,631

*First production May 9.

Southwest Texas

Dale	523
Branyon	27
Bruner	41,540
Gonzales	66
Kingsville	245
Larremore	164
Luling*	12,425
Lytton Springs	1,067
McMullen	63
Medina	30
Mirando district	12,970
Refugio	1,970
Somerset	1,712
Yoast	1,857
Total	74,659
Total previous week	73,139
Increase	1,520

*Includes: Caldwell County, 8,360 bbls.; Guadalupe County, 4,065 bbls.

Completions of Week

Completions of the week, except for the Port Neches wildcat, added very lit-

(Continued on Page 130)

SEVEN COMPLETIONS IN MUSKEGON, LARGEST ESTIMATED AT 1,500 BBLS.

By Special Correspondent

MUSKEGON, Mich., May 11.—A 100 per cent successful record of seven new Dundee producers and no dry holes in the Muskegon Field was spoiled last week by the decision to plug a well which has been worthless since it was completed several months ago in Section 5, Muskegon Township, where bottom salt water killed a number of edge wells. It was decided to abandon this well, the Holland Oil & Gas Company's No. 2 Jack Joslyn, NE SE Section 5-10-16, at 2,047 feet where oil, gas and water were encountered simultaneously.

Not only the most but also the largest of the seven new Dundee oil wells completed were in Laketon Township. The best well was Charlotte G. Marsh and others' No. 2 A. Young, SE NE Section 12-10-17. It had the pay sand at 2,025 to 2,028 feet and started making 90 bbls. an hour and about 1,000,000 feet of gas. It is estimated at 1,500 bbls. initial.

Two other Laketon Township wells came in good for about 400 bbls. a day in the Dundee. They are the Johnson Oil Refining Co.'s No. 12 John Thompson, SW NE Section 12-10-17, and the Dixie Oil Co.'s No. 4-D Kate McLaughlin, SW SW Section 12-10-17. The Johnson-Thompson well had the pay from 2,055 to 2,061 feet. The Dixie-McLaughlin well had it from 2,056 to 2,062 feet.

Each of two more new Laketon Township wells made 200 bbls. initial in the Dundee. The Holland-Weideman Association's No. 2 Charles Comley, NE NE Section 14-10-17, and the Double Shot Oil Co.'s No. 2 Henry Dykstra, NW SE Section 12-10-17.

Made 500 Bbls.

Fred J. Estes and others' No. 1 Ellis I. Page, NE SE Section 6-10-16, made 500 bbls. initial at 2,039 feet, or 2 feet in the lower pay sands.

The Swastika Oil & Gas Co.'s No. 2-B Gilbert, SW SE Section 6-10-16, made only 50 to 100 bbls. initial as a pumper.

A. S. Cochran had a show of oil in the upper Traverse at 1,670 to 1,695 feet in No. 1 Clowar, NW NW Section 13-10-17, which pumped 20 bbls. the first day.

Drillers are still working on the Continental Motors Corp.'s No. 11 fee, NE NW Section 22-10-16, Muskegon Township, which had a good show of oil in the Dundee at 2,087 to 2,090 feet. The show was enough to warrant return to No. 10 fee, NW NE Section 22-10-16, to drill it from the upper Traverse to the Dundee.

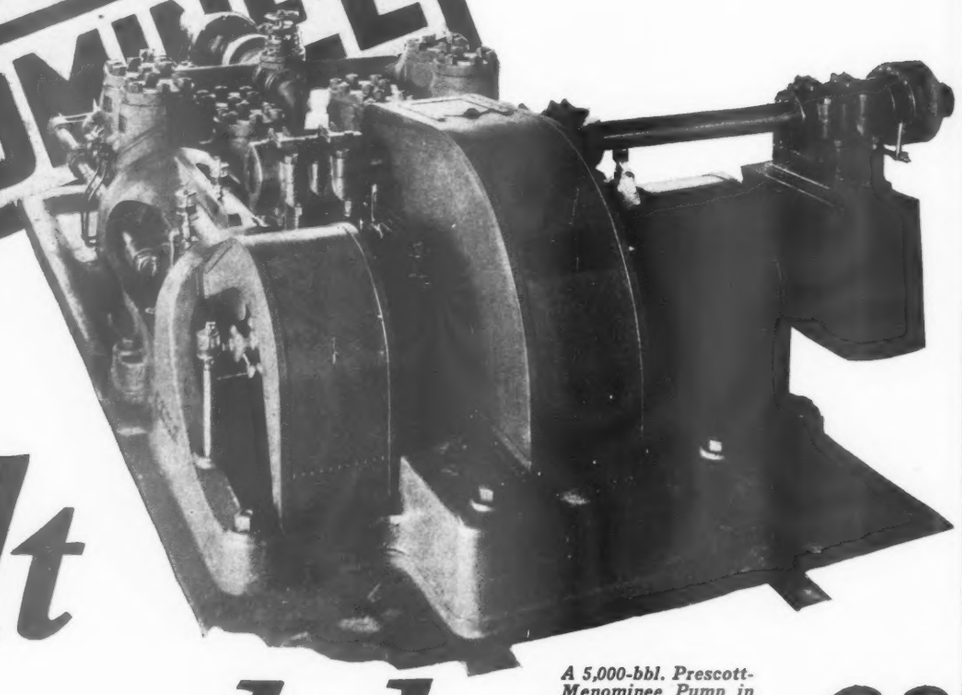
Two other wells in that part of the field are good for at least 10 bbls. on the pump from the upper Traverse: the Melbohaco Oil Co.'s No. 1 Cook, NW NW Section 22-10-16, and Harry Harper's No. 1 Bragg, SW NE Section 15-10-16.

Six new locations were announced in Muskegon Township.

A new rig has been erected by the Fleeger-Ohlson Association on No. 1 John Kolovitz, NE NE Section 21-10-16, Muskegon Township. A rig has been erected and drive pipe is on the way down in Charles W. Marsh and others' No. 3 Ira R. Hallock, NW NW Section 7-10-16.

(Continued on Page 114)

PRESCOTT MENOMINEE



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The high efficiencies of Prescott pumps have set a standard for low cost of pumping — 80 to 86% overall efficiencies are maintained continuously over wide ranges in pumping requirements.

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Drilling Campaign in Lea and Eddy

Vacuum Oil Co.'s Wildcat Attracting Considerable Attention. Water Found in Vineland District, Colorado, Test

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., May 11.—Several new locations in Lea and Eddy Counties, New Mexico, were added this week. This area appears to be entering upon its biggest drilling campaign. The Vacuum Oil Co.'s wildcat in the center of Lea County is estimated making 5,000,000 feet of gas at 4,090 feet and attracting considerable attention. Outside of several good shows, the drilling wells revealed less than usual in interesting information. The Continental Oil Co.'s Pennsylvanian test in San Juan County is still working to shut off water above the pay.

A deep test in the south extension of the Florence Pool in Fremont County, Colorado, ran into salt water at 4,545 feet, indicating a closed structure in that area, the Dakota, in which the brine was found, usually being a fresh water sand. A show of oil and gas was encountered in the Ruby Hill Oil & Gas Co.'s wildcat near Denver, and water was found in the Continental's well in the Vineland district southeast of Pueblo only 30 feet south of the "discovery" well. The Midwest Refining Co. will drill a wildcat on the Buffalo Creek structure in Jackson County.

Wyoming took on considerable interest this week when the Cross Gas Co.'s well on the Byron Dome encountered oil at 4,207 feet on one of the largest structures in the Big Horn Basin. The Midwest Refining Co. has struck oil in the second well drilled to the Embar on the Frannie Dome in Park County and casing is being set preliminary to drilling in. When casing was being pulled on the Wyoming Drilling Co.'s test on the Howard structure in Weston County, 2,000 feet of oil was found standing in the hole, believed to be coming from the second Wall Creek.

NEW MEXICO

Several more locations in Lea County, southeastern New Mexico, were announced this week. Cranfills & Reynolds' No. 1-B State, NE cor. Section 2-21-33, is moving in. The footage is 330 feet each way out of the corner. Joe Cook and others' No. 1 State, C SW NE Section 12-21-33, is building derrick, and the Texas Production Co.'s No. 1 Moore, Section 24-20-32, is a location, the footage not yet being available. The Marland Production Co.'s No. 1 Anna C. Moore, NW cor. SE Section 24-20-32, is moving in, the location being 2,310 feet from the south line and 2,310 feet from the east line. Three of the Marland locations tentatively announced last week have been definitely made. No. 1 Flint, SE cor. Section 28-20-34, is moving in; No. 1 McAllister, 330 feet from west line and 330 feet from south line, SE Section 24-26-36, and No. 1 Wells, 330 feet from south line and 330 feet from east line NE Section 11-25-36, are both moving in.

Outside of the new locations interest centered principally in the Vacuum Oil Co.'s No. 1 State, center of section line between Sections 13 and 14-17-34, about the center of the county. This well had more gas at 4,090 feet, the quantity being estimated at 5,000,000 feet. It had 2,000,000 feet in sandy lime at 3,848-52 feet, which increased at 3,862 and 4,090 feet. This well is 2½ miles southeast of the Inglefield & Bridges No. 1 State, abandoned at 5,344 feet last June, though it had several good shows and probably would have made a 12-bbl. well. The Vacuum company's well is not yet down to the horizons which were most promising in the Inglefield & Bridges test. The Empire Gas & Fuel Co.'s No. 2-B State, SW SE Section 8-21-35, is drilling at 895 feet in the red beds and carrying the 10-inch. The Gypsy Oil Co.'s No. 1 Humphreys, NW cor. SW Section 25-25-36, in the Jal district, is building rig, and its No. 1 Mattern, SW cor. SE Section 24-21-36, in the Eunice district, is fishing for bit at a total depth of 3,125 feet. Cranfill & Reynolds' No. 1 Wilson, NW NE Section 23-25-36, in the Jal district, flowed 63 bbls. natural in 24 hours from a total depth of 3,400 feet, and its No. 1 Meyers, NE cor. SE Section 22-24-36, commenced spudding on May 2. Bull & Hagen's No. 1 State, C NE Section 33-11s-35, is shut down at 1,145 feet in red rock, and Henderson, Dexter & Blair's No. 1 McDonald & Jewett, SE cor. Section 18-20-34, is drilling out plug after cementing the 8¼-inch at 3,166 feet in lime. The Texas Production Co.'s No. 1 Moberly, NW SE Section 17-26-37, is cleaning out at 3,401 feet with cable tools. Total depth is 3,542 feet. Same company's No. 1 Shepherd, SE cor. NE Section 6-26-37, has commenced drilling up junk in the hole at 3,170 feet. Total depth is 3,223 feet. The Midwest Refining Co.'s No. 16 Fisher, SW NW NE Section 5-20-35, is drilling at 503 feet in brown shale and its No. 22 Gregory, SE SW Section 31-25-37, is drilling at 1,145 feet in anhydrite. Same company's No. 31 Capps, SW cor. Section 3-19-38, in the Hobbs district, is drilling at 1,465 feet in red shale. The Pueblo Oil Co.'s No. 1 Crosby, SW SW Section 29-25-37, is drilling at 2,680 feet in hard gray lime, and the Texas & Pacific Coal & Oil Co.'s No. 1 State, SE cor. SW Section 22-23-36, is coring at 3,813 feet in lime. The Shell Petroleum Corp.'s No. 1 Terry, SW NE Section 22-19-38, is building rig.

Eddy County

In Eddy County, two locations unofficially reported are the Marland Production Co.'s No. 1 Cunningham, NE Section 8-20-30, and the Prairie Oil & Gas Co.'s No. 1 Gessert, SW NW Section 18-17-31. Flynn, Welch & Yates' No. 2 Gissler, SE cor. SW Section 12-17-30, commenced spudding on April 29. Leonard & Levers' No. 1 Haggerty, NE cor. NW Section 18-16-30, northeast of the Artesia Pool, is reported to have had an additional show of oil at 3,367 feet. The formations indicate the bottom is still above the pay encountered in Flynn, Welch & Yates' No. 1 Jackson in the same general area. The Grayburg Oil Co.'s No. 1 Burch, C NW SW Section 19-17-30, in the same district, is reported to have had a show of free oil at 1,430 feet. Eaton and others' No. 1 Rich, NW cor. SE Section 29-17-27, in the Artesia Pool, is shut down at 2,184 feet. George F. Getty, Inc. No. 1 Cook-Ironsides, C SW NW Section 8-20-29, in the Twin Mounds district, is drilling at 180 feet in the red beds.

In Guadalupe County, the Hanchett Oil Co.'s No. 1 Rutherford, SW cor. NE Section 24-8-24, is fishing at 2,260 feet in sand, the tools being in the hole.

In Chaves County, the Transcontinental Oil Co.'s No. 1 Robbins, SE cor. Section 1-14-28, is drilling at 2,610 feet in gray lime. The 10-inch was set at 2,435 feet. L. B. Tannehill's No. 1 Butler, SE cor. Section 15-12-24, is drilling at 938 feet in lime.

In DeBaca County, the Pittsburg Oil Co.'s No. 1 McAdoo, SW cor. NE Section 16-1s-27, is drilling at 4,440 feet in lime and the Transcontinental Oil Co.'s No. 1 McWhorter, SW NW Section 6-3s-22, is bottomed at 4,030 feet and fishing for bailer.

San Juan County

In San Juan County, in the northwestern corner of the state, the Continental Oil Co.'s No. 17 Santa Fe Corp., C NE Section 2-29-19, Rattlesnake Dome, has made comparatively little progress since encountering oil in the Pennsylvanian at 6,771 feet, below a thin water sand. Underreaming the 4¾-inch was very difficult on account of the depth and pressure and some other plan probably will be tried. In fact, it is probable that considerable work will have to be done on the well before any appraisal of the value of the discovery can be made. The Angel Peak Oil Co.'s No. 1 Garland, NE NE Section 11-28-11, Kutz Canon district, is still held up at 3,000 feet with a fishing job, and the Milwaukee-New Mexico Syndicate's No. 1 Beardsley, C NE Section 30-28-11, is waiting for delivery of a string of 6¼-inch casing. The Childers Drilling & Producing Co.'s No. 2, NW NW Section 24-31-16, Westwater Dome, is drilling at 2,350 feet. The Reserve Oil Co.'s No. 2 Shaffer, SE cor. NE Section 1-21n-14w, Stony Butte district, is drilling at 100 feet. This company is reported to have recently taken over the 3,000 acres held under permits by the Ohio Oil Co. to be drilled to the shallow horizons which showed oil in the Midwest's pioneer well. R. R. Burke is president of the company, and William Mansfield secretary and treasurer.

In Valencia County, the Acme Development Co.'s No. 1 Santa Fe, SW NW Section 27-7n-4w, is reported drilling at 3,670 feet with the 8¼-inch cemented at 3,660 feet.

In Chaves County, Snowden & McSweeney's No. 1 Merchant, NW NW Section 27-15-23, is shut down at 4,272 feet in lime. The 6⅝-inch casing collapsed at 2,000 feet.

In Torrance County, the Sinco Oil Co.'s No. 1 Katchin, NE NW Section 13-7n-7e, is bottomed at 197 feet and preparing to pull pipe to straighten.

UTAH

The Continental Oil Co.'s No. 1 Boundary Butte, Section 22-43-22, San Juan County, southeastern Utah, is drilling ahead slowly at 5,080 feet and is holding interest keyed to the highest tension. The formations are correlating with those in the deep test at Rattlesnake in northwestern New Mexico and it is believed the objective horizon in the lower Pennsylvanian will be reached within the next 50 feet. The hole is in good shape to go into the sand and if oil is encountered it is probable that an actual test may be secured earlier than in the Rattlesnake well due to the greater depth and smaller hole in the New Mexico well. The Boundary Butte structure is much the larger of the two and the gas pressure is heavier and the indications are extremely encouraging.

The Utah Southern Oil Co.'s No. 1-A J. L. Shaffer, Section 36-26-20, on the Cane Creek Dome in Grand County, is resuming after being shut down for casing. It is bottomed at 3,096 feet

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TWO NEW PRODUCERS FOR ROYALITE COMPLETED IN TURNER VALLEY

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, May 11.—In the Turner Valley Field, Royalite Oil Co. has added two new producers to its string. Royalite's No. 21 is on production in the Dalhousie sand at 3,862 feet and making around 60 bbls. of light crude. Royalite's No. 17, LSD 13, Section 6-20-2w5, discontinued drilling in the deep lime at 4,034 feet, after striking an additional wet gas flow. It is making 8,500,000 feet, but the crude naphtha recovery has not yet been determined. Royalite's No. 19, LSD 5, Section 6-20-2w5, is in the top of the deep lime at 4,462 feet, and will cement casing.

Royalite Oil Co.'s No. 6, LSD 16, Section 31-10-2w5, is at 4,531 feet and digging runway to cellar. Royalite's No. 12, LSD 3, Section 13-20-3w5, is drilling at 4,210 feet. Royalite's No. 16, LSD 2, Section 12-20-3w5, is at 5,060 feet and jarring on liner. Royalite's No. 23, NW Section 31-19-2w5, is drilling at 2,352 feet.

Shareholders of the Royalite Oil Co. at their annual meeting re-elected directors as follows: A. M. McQueen, R. B. Bennett, J. H. McLeod, Miss F. M. Smith, C. W. Moore, William Pearce, A. E. Cross. Declaration of a 25-cent dividend was ratified. It was stated that a $2,000,000 loan from Imperial Oil, Ltd., would be repaid if, as and when oil was produced to repay it. All present wells are being drilled either under contracts to develop certain leases or as offsets. Imperial Oil, Ltd., holds 336,490 shares, or 85 per cent, of the Royalite stock.

Dalhousie Oil Co.'s No. 1, LSD 4, Section 18-20-2w5, which recently blew back into production at 4,565 feet, is reported making 280 bbls. crude naphtha. Dalhousie's No. 7, LSD 11, Section 18-20-2w5, 1,200 feet south of No. 5, is drilling at 64 feet.

Foothills Oil & Gas Co.'s No. 2, LSD 8, Section 1-20-3w5, which recently got 2,000,000 feet of gas in the top of the lime, is standing cemented at 4,357 feet. Foothills' No. 3 (Southwest Petroleum), LSD 16, Section 8-19-2w5, rotary test is drilling at 2,697 feet. Foothills' No. 4, LSD 1, Section 26-20-3w5, is down 30 feet and drilling.

Home Oil Co.'s No. 2, LSD 14, Section 20-19-2w5, has rigged up with diamond drill and started to drill into the deep lime at 5,353 feet. Production is looked for in the top 350 feet of the lime. Home's No. 3, same LSD, is drilling out cement in the top of the lime at 5,033 feet. Home Oil Co.'s No. 4, Section 20-19-2w5, is drilling at 3,260 feet. It is reported cellar is being dug for Home's No. 5, same section. Directors of Home Oil Co. recently declared a first dividend of 20 per cent, payable June 29 to shareholders of record June 8.

Arrangements have been made whereby Imperial Oil, Ltd. in conjunction with Home Oil Co. will control Hargal Oils, Ltd. acreage in the south end of the Turner Valley, and drill out the lease, which covers 40 acres in the heart of the Home Oil Co. holdings. It is reported

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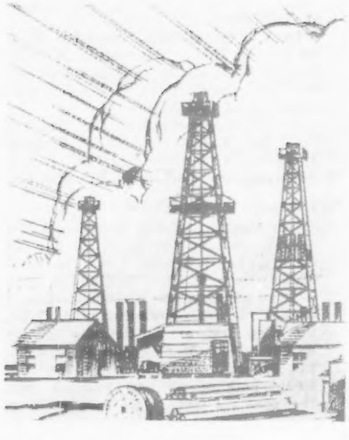
AMERICAN WIRE LINES



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Big Wells Hold Up California Output

Production, However, Would Be 75,000 Bbls. Daily More but for Conservation Movement. Big Gasser in San Joaquin Valley

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., May 11.—Although Umpire F. C. van Deinse has accomplished a substantial curtailment in crude oil production the completion of numerous new large producing wells in the Santa Fe Springs, Long Beach and Seal Beach Fields has prevented the reflection of the entire quantity shut in on state production in as much as these new wells are permiteed to flow unrestrained for a period of 10 days following completion. State production at the present time is approximately 40,000 bbls. per day below the daily output of April 22 when the umpire's first curtailment order went into effect. This reduction is due primarily to curtailment measures initiated principally by the major companies although a minor part may also be due to normal decline in older producing wells. In comparing present production with that of April 2, it must be remembered that the actual decline between these two periods does not adequately represent existing conditions or reflect the total curtailment accomplished, since state production would be considerably in excess of 800,000 bbls. per day at present if no curtailment measures had been initiated. It is conservatively estimated that about 75,000 bbls. per day has been shut in or, to put it another way, state production would be that amount higher than it is at present if the mutual curtailment program had failed of accomplishment.

Umpire van Deinse has just issued General Order No. 3, which will become effective at 7 o'clock Thursday morning, May 16, and while it does not show any radical departure from previous regulations subsequent orders will probably show just who is carrying out instructions as well as those who are evading the moral obligation of participating in this commendable attempt to stabilize the economic structure by mutually reducing production. Every attempt is being made by the umpire to equalize the responsibility of each operator and a corps of engineers has been engaged to prepare decline curves for each area in order to eliminate any possibility of unduly penalizing any producing well. Experience gained up to the present time has indicated the desirability of adopting a graduating scale for the curtailment of various wells depending upon the individual daily production of each. This problem has been under consideration by the umpire for several weeks and will no doubt be put into effect in the near future. This projected method embodies the plan of penalizing large producing wells which are the direct cause of present excessive production and will thus alleviate conditions confronting the small operator with a few small pumpers.

Burden on Flush Wells

The equity of placing the greatest burden on large flush wells is quite obvious and will no doubt find favor among independent producers, many of whom have failed to oco-operate up to the present time because in their opinion flush fields have not borne a large enough curtailment. The mechanics of operation will probably be worked out by applying a basic curtailment for each field and adding thereto an additional graduating curtailment depending upon individual well production. In other words, a general order would be issued for a reduction in production of 10 per cent for all wells producing under 50 bbls. per day. An additional curtailment of 5 per cent would be made in wells yielding under 500 bbls. daily. A 1,000-bbl. well would be cut another 5 per cent, making a total reduction of 20 per cent for producers in this class. Wells producing over 1,000 bbls. daily would be cut to a still larger extent. The percentages used in the foregoing are only arbitrary and are used merely to illustrate a proposal submitted for consideration. This method was originally suggested to the writer by Oscar R. Howard, prominent Santa Fe Springs operator, shortly after organization of the original Santa Fe Springs' operators committee during the early part of April.

The San Joaquin Valley area sprung into the limelight during the past week when the Dudley Ridge Syndicate's wildcat in Section 12-23-19 blew in out of control with a terrific roar flowing 35,000,000 feet of gas daily from the comparatively shallow depth of 1,305 feet. The output from this wildcat, which is located about 5 miles east of the middle dome at Kettleman Hills and a few miles south of Tulare Lake, is a marsh gas which has been known to exist in the Tulare Lake region for many years. The volume of production, however, has never heretofore reached the large quantity shown by the Dudley Ridge Syndicate's wildcat. This gas horizon has a definite economic value as commercial fuel, an analysis showing 997 B.t.u. The well was still running wild at last reports but appeared to be diminishing in volume, indicating the probability of sanding up in the near future. The rig and equipment was demolished within a few minutes after the well blew in early Sunday, May 5. It is not likely that this natural gas will become a factor for the present due to limited market requirements and inadequate pipe line facilities. The enormous potential production of natural gas at Kettleman Hills precludes the development of commercial gas production in the Tulare Lake region for some time to come. It could be used to advantage, however, for repressuring operations in depleted fields of the San Joaquin Valley and something may be worked out along this line. The Dudley Brothers, who drilled this wildcat, own considerable acreage in fee immediately adjacent to the well.

Santa Fe Springs Completions

The past week witnessed the completion of another group of satisfactory producers in the Santa Fe Springs Field of Los Angeles Basin and a check indicates the probable completion of a somewhat larger number during the next seven-day period. The Texas Company, which has experienced considerable success in deep-zone development at Santa Fe Springs, put two wells on production during the past week. One of these, No. 11 on Mattern Lease No. 3, was a recompletion after being redrilled and deepened to the O'Connell zone. This rejuvenated well, which was originally completed flowing 1,225 bbls. daily from the Buckbee zone at 5,765 feet last December, was returned to production a few days ago flowing 2,970 bbls. of exceptionally clean 34.5 gravity oil daily from the O'Connell horizon at an even 6,700 feet. The Texas Company also finished No. 10 on Mattern Lease No. 2 during the current week and this new well was brought in under a natural flow doing 3,828 bbls. of clean 34.6 gravity oil daily from the O'Connell zone at 6,589 feet.

The St. Helens Petroleum recompleted No. 1 Hill flowing 4,400 bbls. of exceptionally clean 34.5 gravity oil daily from the O'Connell zone at 6,350 feet this week but tentative plans contemplate a resumption of drilling in order to secure increased production. This well, which was completed in the Buckbee zone last January flowing 2,810 bbls. daily from 5,806 feet, blew in prematurely while a water test was being made during the early part of the week flowing at the rate of 195 bbls. per hour with the result that only 7 feet of oil sand has been penetrated in the O'Connell horizon. Officials of the company are of the opinion that production could be substantially increased by taking an additional 50 feet of penetration. It is quite probable that this well will be permitted to flow for another week or 10 days before being killed as the casing pressure has remained relatively constant at 480 pounds. The Richfield Oil Co., which recently completed Nos. 3 and 4 on the Oscar Howard property as substantial producers in the O'Connell zone, followed up this success by recompleting No. 1 Oscar Howard, which the company originally finished last December flowing 6,840 bbls. per day from the Buckbee horizon at 5,745 feet. Upon being returned to production a few days ago this well was brought in under a natural flow doing 3,680 bbls. of clean 34.4 gravity oil daily from 6,463 feet. This property, incidentally, is being developed by the Richfield in conjunction with Oscar Howard on a 50-50 basis, the latter retaining possession of all upper zone producers completed prior to consummation of the deal with Richfield involving deep-zone development below the Meyer horizon.

The third Twin Bell Syndicate, organized by the sponsors of the original Twin Bell Syndicate, successfully finished No. 1 Lamb during the early part of the past week and this new well tanked 1,510 bbls. of unusually clean 34.4 gravity oil during the initial 24-hour test from the O'Connell horizon at 6,492 feet, the hole having been finished with a 6¼-inch oil string landed and cemented at 6,402 feet. The Universal Consolidated Oil Co. recompleted two Buckbee zone producers this week after redrilling and deepening them to the O'Connell horizon. No. 6 Blanchard, which was originally finished last November flowing 3,320 bbls. daily from 5,789 feet, was returned to production a few days ago flowing 3,740 bbls. from 6,527 feet. No. 8 Blanchard, which came in last December doing 5,065 bbls. per day from the Buckbee zone at 5,745 feet, has been recompleted flowing 6,560 bbls. per day from the O'Connell horizon at 6,667 feet. The Universal also concluded drilling operations on No. 9 Blanchard and No. 5 O'Connell, both former Buckbee zone producers, and preparations are under way to make an early production test. The Texas Company wound up the week by finishing No. 4 Steinly doing 1,650 bbls. daily from 6,345 feet and should have No. 4 Standlee tanking oil within the next day or two.

Long Beach

The Delaney Petroleum Co., under the personal supervision of A. J. (Art) Delaney, finished an exceptionally large producer in the Long Beach Field during the past week when No. 3 Wellington was brought in under a natural flow from the Miocene formation at 7,072 feet, the hole having been finished with a 5¾-inch combination string cemented through perforations at 6,370 feet. This new well, which has a penetration in the oil zone of 702 feet, blew in flowing 5,220 bbls. of exceptionally clean 30.8 gravity oil and 2,100,000 feet of saturated gas daily. The natural gas from this new producer is yielding 5,200 gallons of natural gasoline daily, bringing the total daily income to approximately 89,100. Although drilling operations in the Long Beach Field have been growing smaller from week to week during the past several months, due principally to decreased development work by The Texas Company, Shell, Richfield and others, production has remained unusually stable. The Dabney-Johnston Oil Corp., which has been pursuing an aggressive development campaign, is at present the largest single operator in this field with 19 strings of tools to its credit. Qute a number of new wells are being started throughout the field and this district is expected to continue to be an important factor in state production for some time to come due to this progressive drilling and the enormous thickness of oil-bearing formation present.

The Apex Petroleum, which recently finished its No. 13-B, a new well doing 405 bbls. of exceptionally clean 29.9 gravity oil daily from 6,894 feet, has transferred the crew from this project to No. 16-B, a new well just spudded in. The Allied Petroleum is also starting a new well and has a rig going up for this project at Twenty-Seventh and California Streets. The Dabney-Johnston Oil Co., with four wells rotating ahead in the oil sand, is rigging up rotary equipment for three more scheduled for early work. Preparations are also being made for additional work by Bailes & Meyers, D. D. Dunlap, Otis Hoyt, Jergins Trust,

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC, GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	328,410	2,129,347
Fuel oil	.....	.....	.....	.....	49,950	111,621
Diesel and gas oil	.....	.....	.....	.....	800,124	757,927
Gasoline	472,511	67,502	394,676	56,382	7,215,944	3,956,371
Naphtha distillate	.....	.....	.....	.....	81,750	.....
Coastwise—						
Crude oil	278,929	39,847	698,748	99,821	9,257,995	7,524,272
Fuel oil	397,035	56,719	427,956	61,137	7,963,217	6,967,954
Diesel and gas oil	90,363	12,909	17,875	2,554	582,900	513,783
Gasoline	289,262	41,323	224,360	32,051	4,024,469	1,422,285
Kerosene	3,582	512	.....	.....	18,777	24,415
Naphtha distillate	.....	.....	.....	.....	.....	171,566
Exports—						
Crude oil	63,800	9,114	54,975	7,854	1,804,328	866,292
Fuel oil	359,672	51,382	341,472	48,782	6,732,815	9,400,957
Diesel and gas oil	59,574	8,511	.....	.....	817,511	1,115,818
Gasoline	64,370	9,053	.....	.....	3,148,371	1,638,045
Kerosene	131,851	18,836	.....	.....	1,017,385	1,710,736

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Diesel and gas oil	.....	.....	.....	.....	.....	342,425
Gasoline	.....	.....	.....	.....	935,547	891,459
Lubricants	.....	.....	.....	.....	.....	208,024
Coastwise—						
Fuel oil	63,155	9,022	.....	.....	911,889	1,493,597
Diesel and gas oil	.....	.....	.....	.....	234,220	115,859
Gasoline	.....	.....	195,230	27,890	1,384,902	1,469,547
Kerosene	.....	.....	.....	.....	39,647	83,054
Exports—						
Crude oil	.....	.....	.....	.....	121,603	79,198
Fuel oil	.....	.....	.....	.....	241,671	870,773
Diesel and gas oil	.....	.....	.....	.....	124,838	10,400
Gasoline	202,663	28,952	74,158	10,594	2,210,399	1,613,879
Kerosene	.....	.....	.....	.....	199,428	307,089
Lubricants	.....	.....	.....	.....	17,688	.....

Macmillan Petroleum, Miller & Lewis, Petroleum Securities and the South Basin Oil Co. In addition to the satisfactory completions listed this week, several other wells failed to show commercial production due to water trouble. One of these, No. 2 Bell of the Bush-Voorhies Oil Co., completed at 6,794 feet, is cutting 80 per cent water. This well was also a disappointment from a production standpoint as it only showed an initial of 120 bbls. daily. The General Petroleum's No. 3 Mission, which was redrilled and deepened to 7,486 feet, also proved disappointing, as the initial of 230 bbls. daily is still cutting 50 per cent water several days after completion.

Lawndale

The Lawndale Field, which has changed from a beehive of activity to a graveyard of suspended and abandoned wells within the short space of 60 days, has witnessed one of the most disastrous town lot drilling campaigns ever undertaken in California. The substantial loss of at least $5,000,000 sustained by town lot operators in this field has resulted from the unwarranted drilling of more than 50 wells in an area too remote from production. Subsequent drilling may later reveal a new deep zone below 7,000 feet but even this possibility does not justify the original intensive development in the town lot area across Inglewood Avenue east and northeast of the discovery well. One or two wells due east of the discovery have secured small production from the San Clemente zone but it is doubtful if even these will ever pay out. The most attractive section of the Lawndale Field at the present time is northwest of the discovery well, where several drilling projects have recently shown favorable indications. It became quite evident several weeks ago that the productive area at Lawndale would be very limited in scope, and as a consequence development work in the town lot area was suspended. This action did not take place, however, until many wells had already exceeded a depth of 5,000 feet.

The San Clemente Oil Co. finished an exceptionally good well at Lawndale this week, and while the output of this project enhances the value of adjacent acreage it does not offer any encouragement to town lot operators. This new well, which was bottomed at 5,911 feet and finished with a 4¾-inch liner, showed an initial daily production of 1,090 bbls. It is located one location west of the Pacific Western's No. 2 Howland and is about a similar distance removed from the Smith Development Co.'s No. 1 Peck. In addition to No. 2 Peck of the San Clemente, which was finished a few days ago, three other wells have been completed up to the present time. These are No. 1 Peck of the Smith Development Co., at present flowing 640 bbls. daily from 5,897 feet, No. 2 Howland of the Pacific Western Oil Co., making 380 bbls. daily from 5,895 feet and No. 2 Brown of the Petroleum Securities, pumping 125 bbls. daily from 6,290 feet. Operators interested in the development of production at Lawndale are watching the outcome of work on the Sovereign Oil Co.'s No. 5 as this well has apparently encountered encouraging showings. This is evidenced by the fact that the company stepped out several days ago and tied up every available lease immediately adjacent to its drilling project which, incidentally, is scheduled for an early production test below 7,000 feet. A string of 7-inch was landed and cemented in the Sovereign's well at 7,130 feet and although no information is being released the company's action in taking over several drilling projects and acquiring additional leases indicates the probable coring of a new sand. The Union Oil Co.'s No. 1 Johnson, located northwest of production, has been coring brown shale and oil sand for the past 100 feet, and while drilling has not yet been concluded, it is considered one of the most promising drilling projects under way in this field at the present time. This well will bear watching, as it is considerably north of production, and will extend the protective limits to an appreciable extent if commercial production is secured.

Seal Beach

The Marland Oil Co. successfully finished another deep zone producer in the Seal Beach Field of Los Angeles Basin during the early part of the current week and incidentally increased its daily production 1,970 bbls. of 28.1 gravity oil. This well, No. 23 Bixby, which was plugged back from 5,700 feet to 5,645 feet, was originally completed in the Selover zone flowing 660 bbls. daily from 4,780 feet in September of last year. The Marland has several other potential producers nearing completion in this field at the present time and it is quite probable that either No. 1 Selover or Nos. 5 and 11 on the Bixby lease will be tanking oil within the next ten days. The Associated also chalked up a new well this week when No. 13 Bryant was brought in under control flowing 1,298 bbls. of clean 28.1 gravity oil daily from 5,465 feet. The Standard is expected to augment its current production shortly as this company has two wells standing cemented in the pay at the present time. Daily production at Seal Beach, reflecting drilling operations after lying dormant for more than a year, reached a current daily peak of 50,000 bbls. just previous to the issuance of Umpire Van Deinse's initial curtailment order, but has subsequently been reduced due to the action of the Associated, Marland and Standard in carrying out the provisions of this mutual proration. The California Eastern Oil Co. recompleted No. 1 Pollard in the Potrero town lot area a few days ago and this project is flowing 370 bbls. daily after being held up for several weeks because of water trouble. Max Pray has picked up 30 feet of oil sand in his outpost north of the California Eastern's new well and an early test will be made. This well seems to be correlating higher than No. 1 Pollard and will therefore be watched very closely as it may prove up the existence of a new extension.

Midway-Sunset

Considerable activity is getting under way out in the Maricopa Flats, where the Signal Oil & Gas Co. recently completed a 2,000-bbl. producer from the Maricopa brown shale. The North American Consolidated has several wells already under way and is rushing construction work on several additional derricks. The Signal Oil & Gas Co. has just spudded in No. 4 Sheehan and has two drilling projects under way in addition to Nos. 1 and 2 already on production. There were no developments of interest in the Midway section of the Midway-Sunset Field during the week as drilling operations in this area are rather limited in scope. The Mount Poso and Round Mountain fields of Kern County are witnessing increased development and it is quite likely that a number of new wells will be finished in these two fields during the next several months. The Petroleum Securities finished No. 12 Glide in the former area during the past week, but this well was shut in upon conclusion of the initial production test, which credited it with a potential of 200 bbls. daily from 1,712 feet. This company has spudded in two new wells and tentative plans contemplate the starting of two more immediately. The Buttram Oil Co., General Petroleum and Ohio Oil Co. are also making preparations for additional work.

Three new wells are being drilled in the Round Mountain Field at the present time, all of them being recent spuds. The Honolulu Consolidated is working on a new hole in Section 34-28-29, while the Shell has one driller under way on the Caldwell lease in Section 7-28-29 and another on the Jewett property. The Shell recently completed No. 4 Freeman in this field doing 198 bbls. daily from 1,726 feet, but it was shut in subsequent to completion due to the absence of pipe line facilities. The West Front area of the old Kern River Field is also witnessing a revival of drilling following a suspension of several months' duration. The Chanslor-Canfield Midway Oil Co., which recently finished No. 24, a new well in Section 23-28-27 doing 840 bbls. daily from 2,155 feet, spudded in No. 25 simultaneous with the starting of work on No. 35 Young, a new well of the General Petroleum. The latter company is rigging up two additional projects for early work in conformity with lease requirements.

Kettleman Hills

Increased development in the Kettleman Hills Field of Kings County has complicated the projected curtailment problem involving this area, although something definite will of necessity result from the movement initiated by operators several weeks ago. There are 24 strings in operation in the Kettleman Hills Field at the present time but it will probably be several months before additional production can be developed, due to the extreme depth at which production is secured. This gives operators plenty of leeway to determine the future policy with respect to develop-

(Continued on Page 127)

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well, location—	S-T-R	Depth	Status
Standard, No. 5-9 Saticoy, Ventura Co.	10- 2-22	6,160	br. sh. drilling
American Oil Co., No. 1 Camarillo, Ventura Co.	33- 2-20	1,098	fishing
Bolsa Chica, No. 1 Temescal, Ventura Co.	4- 4-18	769	cleaning out
The Texas Company, No. 1 Hueneme, Ventura Co.	Lot 32	2,670	abandoned
The Texas Company, No. 1 Wiley Canyon, Ventura Co.	2- 3-19	510	suspended
Superior Oil Co., No. 1 Santa Paula, Ventura Co.	14- 4-21	Rig	rig cable tools
Craise, F. A., No. 1 South Mountain, Ventura Co.	17- 3-21	Rig	suspended
Miley, E. J., No. 2 Red Mountain, Ventura Co.	7- 3-23	1,280	hd. sd. drilling
Miley, E. J., No. 3 Red Mountain, Ventura Co.	11- 3-24	Rig	rigging up
Shell, No. 1 Simi, Ventura Co.	31- 3-17	2,900	hd. sd. drilling
Continental, No. 1 Sulphur Mountain, Ventura Co.	21- 4-22	3,765	suspended
Continental, No. 2 Sulphur Mountain, Ventura Co.	22- 4-22	6,740	suspended
Lockwood Oil Co., Well No. 1, Ventura Co.	28- 8-21	Rig	rigging up
Milham Explin., No. 1-A Buttonwillow, Kern Co.	8-28-23	4,662	gas well, idle
Milham Explin., No. 2 Buttonwillow, Kern Co.	8-28-23	2,730	gas well, idle
Milham Explin., No. 3 Buttonwillow, Kern Co.	8-28-23	2,694	gas well, idle
Milham Explin., No. 4 Buttonwillow, Kern Co.	6-28-23	2,670	gas well, idle
Milham Explin., No. 5 Buttonwillow, Kern Co.	5-28-23	2,500	gas well, idle
Milham Explin., No. 6 Buttonwillow, Kern Co.	8-28-23	2,676	gas well, idle
Milham Explin., No. 7 Buttonwillow, Kern Co.	6-28-23	2,720	suspended
Milham Explin., No. 8-A Buttonwillow, Kern Co.	8-28-23	2,673	gas well, idle
Lincoln Drlg. Co., No. 1 Buttonwillow, Kern Co.	6-28-23	190	suspended
Richfield Oil Co., No. 3 Semitropic, Kern Co.	36-27-23	5,475	br. sh. drilling
Stabler, W. W., No. 1 Comanche Point, Kern Co.	28-32-29	3,409	suspended
Symark Oil Co., No. 1 Edison, Kern Co.	24-29-29	1,230	suspended
Elmer Oil Co., No. 1 Shafter, Kern Co.	8-28-25	6,100	suspended
Elmer Oil Co., No. 1 Bena, Kern Co.	15-30-30	2,014	sd. sh. drilling
Elmer Oil Co., No. 1 Rosedale, Kern Co.	33-29-26	2,600	cleaning out
Taft Drlg. Co., No. 1 Union Avenue, Kern Co.	2-30-27	.....	location
Shell Oil Co., No. 1 Lerdo, Kern Co.	5-29-27	3,482	hd. sd. drilling
General Pet., No. 1 McFarland, Kern Co.	25-26-25	2,948	hd. sd. drilling
Union, No. 2 San Emidio, Kern Co.	5-10-21	2,950	br. sh. drilling
Currency Pet. Co., No. 1 Jacalitos, Fresno Co.	28-21-14	2,004	gr. sd. drilling
Currency Pet. Co., No. 2 Jacalitos, Fresno Co.	14-21-14	260	suspended
Hornaday & Huggins, No. 1 Kerman, Fresno Co.	32-14-18	3,870	hd. sd. drilling
K. C. L. Oil Co., No. 1 Joaquin Ridge, Fresno Co.	7-19-15	114	suspended
Thomas Pet. Co., No. 1 Krayenhagan, Fresno Co.	33-22-17	568	cleaning out
Petroleum Securities, No. 1 Coalinga, Fresno Co.	20-20-16	.....	location
Union, No. 1 Huasna, San Luis Obispo Co.	34-32-15	3,565	br. sh. drilling
Union, No. 1 North Huasna, San Luis Obispo Co.	12-32-14	3,540	hd. sd. drilling
Midwest Refining Co., No. 1 Huasna, San Luis Obispo Co.	34-31-15	Mtl.	building rig
Panorama Oil Co., Well No. 1, San Luis Obispo Co.	7-31-21	3,780	gr. sd. drilling
Shell, No. 2 Guadalupe, Santa Barbara Co.	26-10-35	2,190	sd. sh. drilling
Shell, No. 3 Goleta, Santa Barbara Co.	36- 5-31	3,412	sesqe, drilling
Petroleum Securities, No. 1 Goleta, Santa Barbara Co.	.....	Rig	rigging up
Union, No. 1 Buel Canyon, Santa Barbara Co.	7-7-31	109	sd. drilling
Western Gulf, Point Conception, Santa Barbara Co.	X- 5-33	916	hd. sh. drilling
Standard, No. 1 Point Conception, Santa Barbara Co.	X- 5-34	2,480	hd. sd. drilling
Standard, No. 1 Tortuga Canyon, Santa Barbara Co.	.....	2,420	hd. sd. drilling
Olympic Oil & Refg. Co., No. 1 Mesa, Santa Barbara Co.	29- 4-27	2,456	consider'le gas
Bankline Oil Co., No. 1 Mesa, Santa Barbara Co.	X- 4-27	4,308	abandoned
Exeter Oil Co., No. 1 Mesa, Santa Barbara Co.	X- 4-27	3,971	abandoned
Nugent, J. F., No. 1 Palisades, Santa Barbara Co.	.....	Rig	rigging up
Nevada Standard, No. 1 Goleta, Santa Barbara Co.	10- 4-28	3,450	sd. sh. drilling
General Pet., No. 1 Elwood, Santa Barbara Co.	21- 4-28	2,847	br. sh. drilling
Pacific Western, No. 1 Wiley, Santa Barbara Co.	.....	.....	location
Padre Oil Co., No. 1 Dos Pueblos, Santa Barbara Co.	18- 4-27	2,780	br. sh. drilling
System Oil Co., No. 1 Orcutt, Santa Barbara Co.	36-10-34	1,788	br. sh. drilling
Keystone Oil Co., No. 1 Santa Maria, Santa Barbara Co.	33-10-34	Mtl.	building rig
American Oil Co., No. 1 Summerland, Santa Barbara Co.	33- 4-25	809	suspended
Getty, Geo. F., No. 1 Summerland, Santa Barbara Co.	22- 4-26	4,194	sd. sh. drilling
Lincoln Drlg. Co., No. 1 Summerland, Santa Barbara Co.	22- 4-26	Mtl.	building rig
Keystone Oil Co., No. 1 Surf, Santa Barbara Co.	18- 7-35	.....	location
Shell, No. 1 Summerland, Santa Barbara Co.	18- 4-25	Mtl.	building rig
Channel Oil Co., Well No. 1, Santa Barbara Co.	29- 4-27	6,304	cleaning out
Channel Oil Co., No. 1 Fellowship, Santa Barbara Co.	29- 4-27	1,080	suspended
Continental, No. 1 Carpenteria, Santa Barbara Co.	33- 4-25	4,130	suspended
Continental, No. 2 Carpenteria, Santa Barbara Co.	33- 4-25	1,560	sd. sh. drilling
Elwood Consd., No. 1 Goleta, Santa Barbara Co.	8- 4-29	3,430	oil sand, shale
Colusa Oil Co., Well No. 1, Colusa Co.	31-15- 4	609	hd. sd. drilling
Italo American, Well No. 1, Colusa Co.	20-13- 3	730	hd. sd. drilling
North Counties Oil Co., Well No. 2, Humboldt Co.	36- 2- 1	2,205	suspended
Humboldt Oil Co., Well No. 1, Humboldt Co.	6- 2- 1	3,041	redrilling
Applegate & Renshaw, Well No. 1, Merced Co.	24- 6-10	3,712	hd. sd. drilling
Kuhns, H. L., Well No. 1, Merced Co.	8-12-19	420	gr. sd. drilling
Calhoma Oil Co., No. 1 Livermore, Alameda Co.	9- 3- 3	1,544	suspended
Shell, No. 1 Dudley, Monterey Co.	15-22- 9	2,390	hd. sd. drilling
Union, No. 1 San Lucas, Monterey Co.	8-22- 8	Rig	rigging up
Marland, No. 1 Bradley, Monterey Co.	32-24-11	5,195	hd. sd. drilling
Tux Oil Co., No. 1 Los Gatos, Santa Clara Co.	15- 8- 1	852	suspended
Dudley Ridge Synd., No. 1 Tulare, Kings Co.	12-23-19	1,305	gas blow out
Associated Pet., No. 1 Lewis Creek, San Benito Co.	5-19-10	470	sd. drilling

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Ring Pet. Co., No. 1 Inglewood, Los Angeles Co.	28- 2-14	5,487	suspended
Ohio Oil Co., No. 1 Playa Del Rey, Los Angeles Co.	22- 2-15	5,360	hd. sd. drilling
Petroleum Securities, No. 1 Hermosa, Los Angeles Co.	32- 3-14	5,051	br. sh. drilling
Standard, No. 1 Hawthorne, Los Angeles Co.	5- 3-14	4,180	sd. sh. drilling
Circle Oil Co., No. 1 Gardena, Los Angeles Co.	23- 3-14	4,280	cleaning out
Allied Pet., No. 1 Redondo, Los Angeles, Co.	28- 3-14	4,065	sd. sh. drilling
Shell, No. 1 Redondo, Los Angeles Co.	20- 3-14	Rig	rigging up
Jackson, R. W., No. 1 Whittier, Los Angeles Co.	19- 2-11	1,412	hd. sd. drilling
Burlingham Pet. Co., No. 1 Compton, Los Angeles Co.	17- 3-13	1,550	sd. sh. drilling
Easton & Smith, No. 1 Calabasas, Los Angeles Co.	19- 1-17	2,982	suspended
Pugh Miller Drlg. Co., No. 1 Calabasas, Los Angeles Co.	6- 1-17	2,106	br. sh. drilling
Russell Oil Co., No. 2 Joughin, Los Angeles Co.	25- 3-17	1,704	br. sh. drilling
Pomona Oil Co., Well No. 1, Los Angeles Co.	32- 1- 8	1,106	hd. sd. drilling
Beard, G. F., No. 1 Brea Canyon, Los Angeles Co.	30- 2- 9	Mtl.	building rig
Anchor Oil Co., No. 1 Puente, Los Angeles Co.	19- 2-10	4,820	suspended
Richfield Oil Co., No. 1 Puente, Los Angeles Co.	9- 2-10	4,489	to abandon
Rucker, R. C., No. 1 Puente, Los Angeles Co.	27- 2-10	511	sd. drilling
Shell, No. 1 Coyote, Los Angeles Co.	28- 3-10	114	sd. drilling
Union Oil Co., No. 1 Richfield, Los Angeles Co.	13- 3- 9	Rig	suspended
Western Drlg. Co., No. 1 Richfield, Los Angeles Co.	21- 3- 9	2,909	sd. sh. drilling
Anderson, P. B., No. 1 Hasley Canyon, Los Angeles Co.	1- 3-16	211	sd. drilling
Pico Dome, No. 1 Hasley Canyon, Los Angeles Co.	14- 3-16	345	suspended
Calif. Eastern, No. 1 Wickham, Los Angeles Co.	32- 5-17	3,517	suspended
Coastline Oil Co., No. 1 Devil Canyon, Los Angeles Co.	21- 5-17	514	suspended
Mesa Pet., No. 1 Newport, Orange Co.	21- 6-10	4,260	gr. sd. drilling
West. Drlg. & Prod. Co., No. 1 Newport, Orange Co.	18- 6-10	4,461	suspended
West. Drlg. & Prod. Co., No. 2 Newport, Orange Co.	18- 6-10	2,261	suspended
Travis Drlg. Co., No. 1 Buena Park, Orange Co.	36- 3-11	Rig	abandoned
Hall Pet. Co., No. 1 Murrietta, Riverside Co.	23- 7- 3	975	cleaning out
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	3,232	suspended
Imperial Valley Oil Co., Well No. 1, Imperial Co.	32-11-10	2,760	sd. sh. drilling
Davenport O. & G. Co., No. 1 San Marcos, San Diego Co.	30-12- 8	847	suspended
Turner, S. S., No. 1 Escondido, San Diego Co.	25-12- 2	1,880	bl. sh. drilling

May Open New Field in South Indiana

Perry and Spencer Counties Are Being Given Tests. Central Ohio Leads Central West in Development Work

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, May 13.—The Central Ohio division is far in the lead in new and completed work. While a few good gas wells are being found, the majority are only moderate gas producers while some are hardly worth the connections to put them on the trunk lines, although the gas companies are conserving all the natural gas they possibly can. In the old Lima Field of northwestern Ohio, in Bath Township, Allen County, between Lima and Findlay, C. A. and F. J. Peavey have drilled in No. 3 in the southwest corner of the C. G. Voe, in the southwest quarter of Section 12, with an initial production of 15 bbls. from the Trenton which was topped at 1,316 feet and drilled 31 feet into the sand.

The first well to be drilled in the old Prairie Depot Field of Montgomery Township, Wood County, has just been completed by Bert S. Harder in the southeast quarter of Section 12, on the R. W. Kelley farm, for a 1-bbl pumper at a depth of 1,175 feet.

Hulse & Kundtz, Cleveland, Ohio, operators, have drilled a test in the northeast corner of the Harry Beck farm, on the oil map as the C. D. McDonald farm, in the southeast quarter of Section 30, Pleasants Township, Seneca County, in the Tiffin Field, which is reported with a volume of 100,000 feet of gas from the Trenton at a total depth of 1,546 feet, or 110 feet in the Trenton formation.

CENTRAL OHIO

The Central Ohio Field shows 20 completions for the week, 4 producing wells with an initial of 32 bbls., 6 dry holes and 10 gas wells, while in new work there were stakes driven for 17 new locations and 24 new wells started spudding, a total of 41, which indicates that both the oil and gas men operating in the various counties are keeping up a large development.

In Ashland County, Harmon, Watts & Geiger drilled a test on the Dave Horn 80 acres, Section 4, Lake Township, with an initial production of 20 bbls. from the Berea sand. Same parties made a location on the Wikoff McFarland farm, Section 14, same township, and the Kemrow Co. is drilling on the E. E. Heffelfinger, Section 17. In Orange Township, the same company has an exceptionally good gas well on the John J. Shinabarger, Section 35. The Logan Gas Co. made a location on the O. I. Wiley farm, Section 33. In Perry Township, the Kemrow Co. is drilling No. 1 A. and E. Fridline, farm, Section 33. Ohio Fuel Gas Co. is drilling No. 1-3,527 on the J. H. Van Horn farm, Section 23, Greene Township. In Miflin Township, the Kemrow Co. is drilling on the Upton Andress, Section 14.

In Medina County, the Logan Gas Co.'s No. 2-3,083, on the A. J. House, Section 6, Lafayette Township, is showing for an average sized gas producer in its natural state. Harmon and George are drilling No. 3 on the W. W. Wood, Lot 151, Harris Township, and Glen Fetter and others made a location on the Fetter, in Lot 131.

In Lorain County, Eaton Township, the Ohio Fuel Gas Co. is drilling No. 3-3,528 on the Fred L. Nobles, Section 1. Same company is drilling No. 1-3,403 on the A. W. Taylor, Lot 17, Columbia Township. Logan Gas Co. is drilling No. 2-3,096 on the James Malik, Lot 8, Carlisle Township, and the Wiser Oil Co. is starting a test on the J. C. Palmer, Lot 14, same township.

Wayne County

In Wayne County, Franklin Township, the Arkansas Fuel Oil Co.'s second test on the N. Olmstead, Section 19, is a small gas producer along with 2 bbls. of oil. By cleaning out and drilling a little deeper, the Ohio Oil Co.'s No. 1-2,318, on the Ella Summers, Section 21, Cannan Township, developed a nice volume of gas.

In Holmes County, Paint Township, the Ohio Fuel Gas Co.'s No. 1-342 John J. Harshbarger, Section 6, is a light gas well, and the same company made a location on the Mary Schrock, Section 5. The Logan Gas Co. found a dry hole on the Henry Fritz, Section 33, and staked a location on the Savilla Herman farm, Section 29, same township. In Monroe Township, the Arkansas Fuel Oil Co.'s No. 5 William Miller, Lot 11, is a small gas well at from 3,524-72 feet.

In Richland County, Monroe Township, the Ohio Fuel Gas Co. is drilling No. 1-3,455 on the Fred Mengert, Section 29. In Cuyahoga County, Breck Township, Hulse & Kundtz are starting a test on the Walsh property, Lot 65.

In Knox County, Harry Perkins found a dry hole on the William Durbin, Section 15, Howard Township, at a depth of from 2,621 to 2,630 feet. Ohio Fuel Gas Co. is drilling No. 2-3,514 on the D. R. Matthews, Section 4, Brown Township, and made a location for No. 4 on the Sally Richards, Section 1.

In Summit County, Greene Township, the East Ohio Gas Co. found a good gas well on the Peter Newhouser farm, Section 18.

In Licking County, Hulse & Kundtz hit a duster in No. 8 on the Joseph Chaney, Section 1, Perry Township, at from 2,853 to 2,897 feet. The Preston Oil Co. is drilling No. 3 on the Ollie Loar, Section 5. Whitehill Oil Co. is drilling No. 10 A. A. Ashcraft, Section 9. Hulse & Kundtz are starting No. 9 Joseph Chaney, Section 1, and McClay Brothers are drilling No. 2 Emmett Hoover, Section 3. The Pure Oil Co. is starting a test on the F. E. Slabaugh, Section 8, Fallsburg Township.

Muskingum County

In Muskingum County, Clay Township, William Kline and others have a dry hole in No. 5 on the Theodore and Guy Combs farm, Section 2. No Clinton formation was found in this hole and it was drilled to the Medina at a depth of 3,822 feet. Midland Oil & Gas Co. is drilling No. 3 Ella Denney, Section 18, Hopewell Township. Pure Oil Co. made a location on the Jasper Ashcraft, Section 4, Jackson Township. In Perry Township, the Mid-East Oil Co. made a location on the A. C. Spring, Section 16, and the Clinton Gas Co. is starting a test on the Nannie Spring, Section 6, same township.

In Athens County, Carthage Township, a dry hole was drilled by the Logan Gas Co. in No. 1-3,088 on the N. E. Kincade, Section 32, in the Keener sand at 1,147 feet. In Berne Township, the Ohio Fuel Gas Co. is drilling No. 2-3,521 on the C. D. Henry, Section 34. Same company is drilling No. 2-3,541 on the Frank Sargent, Section 26, Lodi Township.

In Meigs County, Sutton Township, the Ohio Fuel Gas Co.'s No. 1-2,428, on the Nial Salsen, Section 24, Pumped 4 bbls. at from 1,752 to 1,768 feet. Preston Oil Co. has an average gas well in No. 3-1,300 on the Emma Williams, same section, the gas being found in the upper Berea at from 1,786 to 1,807 feet, total depth, 1,813 feet. Same company made a location on the Carl J. Easterday, Section 18, also drilling deeper No. 1-948 on the Robert Crew, Section 23. Pure Oil Co.'s No. 3 J. F. and Blanch Hamm, Section 20, pumped 6 bbls. from the upper Berea at from 1,854 to 1,871 feet. Tyree and others are drilling No. 2 Martin Ebersbach, Section 19, and the Southern Ohio Petroleum Co. is drilling on the Frank Winebremer, Section 36, same township. In Bedford Township, the Ohio Fuel Gas Co.'s No. 1-3,271 on the Charles Brickler, in fractional Section 24, is a light gas well in the lower Berea at from 1,672 to 1,688 feet. In Salisbury Township, Cochran and others found the First Cow Run sand dry at from 585 to 610 feet and may go deeper.

In Jackson County, Franklin Township, the Ohio Fuel Gas Co.'s No. 1-3,361, W. F. Black farm, Section 22, is a very light gas producer in the Clinton at from 2,630 to 2,641 feet; total depth 2,652 feet. Same company made a location for No. 1-3,559 on the W. H. Talbot, Section 36, Coal Township, same county.

In Vinton County, Knox Township, the Co-operative Oil Co. is starting No. 3 Garfield Brooks, Section 3. In Stark County, Lawrence Township, F. A. Brendall and others found a good gas well on the John Neidert, Section 3.

Fairfield County

In Fairfield County, Berne Township, the City Natural Gas Works, has a small gas well in No. 2 on the E. E. and Nettie Linscott, Section 35. The gas was found at from 2,222 to 2,232 feet; total depth 2,265 feet. Same company is drilling No. 3 on the John Mertz, Sr., Section 23, Pleasants Township, same county.

In Guernsey County, Cambridge Township, the Ohio Fuel Gas Co. is drilling No. 1-3,511 Grace B. Miller, Section 8, and No. 1 on the Holley Ashley, Section 4, while George Jewell and others are drilling No. 1 M. L. Spaid, same section. In Wheeling Township, the East Ohio Gas Co. made a location for No. 2 Wilber Wilson, Section 11, and Blackstone and others started drilling No. 4 J. O. Alloway, Section 10. Glendenning Development Co. made a location on the Ben E. Finlay, in Lot 2, Valley Township, same county.

In Morgan County, Marion Township, the Kemrow Co. drilled a duster in the Salt sand at 861 feet, in No. 9 Edmund Parker, fractional Section 4. Bowman and others are drilling No. 1 George H. Carr, Section 24. In Penn Township, the Ohio Fuel Gas Co.'s No. 1 J. P. Dougan, Section 2, is an average gas well from a sand from 1,635-60 feet, total depth 1,666 feet. Same company is drilling No. 1-3,516 W. B. Miller, Section 16, and No. 1-3,505 C. J. Kennard, Section 3. Henning Brothers are drilling No. 17 C. J. Kinnard, Section 2.

Whitehill Oil Co.'s No. 10 A. A. Ashcraft, Section 9, Perry Township, Licking County, is estimated good for 8 bbls. initial production. In Olive Township, Meigs County, the Wehrle Oil & Gas Co.'s test on the Francis Andrews, Section 19, was dry in the upper Berea sand at from 1,870 to 1,871 feet; total depth 1,888 feet.

INDIANA

Leasing activities are noticeable in the extreme southern part of Indiana, especially in Perry and Spencer Counties, both areas having been given a few tests in the past. Just now oil men are going into Perry County and gathering in blocks of leasing for wildcat work. These two counties being only across the Ohio River from Owensboro, the present jumping off place in the western Kentucky fields, give the newcomers to Owensboro an opportunity to get in on the ground floor in what looks like the opening of a new field in Indiana.

The well drilling on the Mrs. Mary H. Glenn farm, 2 miles southwest of the hamlet of Derby, in Section 18-6-1w, at last reports had reached a depth of 425 feet and was in the lime formation with no showing thus far. The 8-inch has not yet been set. This test is being drilled by Glenn Brothers and other parties of Evansville.

Late advice from the well of P. E. Tichenor and others of Evansville on the Welborn farm, at the mouth of Deer Creek, Section 7-7-2, is down to a depth of 165 feet. A good sand with traces of oil was found at 135 feet. Oil men believe this to have been the stray sand found above the Jett sand. The contractors are Turner and Lewis.

J. H. McClurkin and W. S. M. Hughes, superintending the well drilling on the Andrew Jarboe farm, Section 14-6-3, on State Highway No. 37, are down around 125 feet in a hard lime formation. Stinson Brothers, of Owensboro, are doing the contract work while the owners are local business men and representatives of the Kewanee Oil Co., of Robinson, Ill.

A rig has been moved to a location on the Joseph Schneider farm, Section 22-6-3, and spudding will start at once. The rig is owned by Charles Dice of Scottsville, Ky.; the well owners are Hitchins and Robertson of Tulsa, who have located at Cannelton, in Perry County and will assume personal charge of the drilling operations.

West of Troy

The Packard Oil Co. has two rigs running on its holdings a short distance west of Troy where it is now pumping three wells, and drilling the fourth on the farm of Henry Carlton, Section 11-6-4, this being No. 3 for the Carlton farm and close to 100 feet from No. 1 which was drilled in last summer with a fairly good showing but did not prove a satisfactory well due probably to having stopped drilling too soon. This last well found the Jett sand at 470 feet and when 3 feet in the sand the oil rose rapidly in the hole. There seems no doubt it will make a commercial producer, the quality of the sand being richer than in the other wells. When the tools were pulled out at 473 feet the stem was almost off the pin and the operations were shut down until a new one is obtained or the threads re-cut. The outlook of this well is very encouraging and it is understood a rig will now be moved over No. 1 Carlton and an effort made to drill it to the Barlow sand. This company also has a rig cleaning out on the Arthur Ray farm. This locality seems to have a floating sand that requires considerable skill and patience to successfully combat and it is likely in future operations much more time will be given to cleaning out the wells after a shot. As soon as this rig is through with the Ray well will be moved to a location offsetting that farm on the William Grass lease.

The well drilling on the Henry Devillez, Section 18-6-3, is reported in the Jackson sand with considerable showing of gas. The sand was topped at 560 feet and the showing encouraged the owners in anticipating a good well in the Barlow which is found but a short distance below the Jackson sand. This well is owned by the Packard estate and a number of local business men. It is regarded by the oil people as a very important test and, if a good well, will open up a large area and stimulate activity.

(Continued on Page 99)

SUCCESS IS LARGELY A MATTER OF CHOOSING W

Sam West was picked for manager because he knew how to choose wisely.

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INGWISELY

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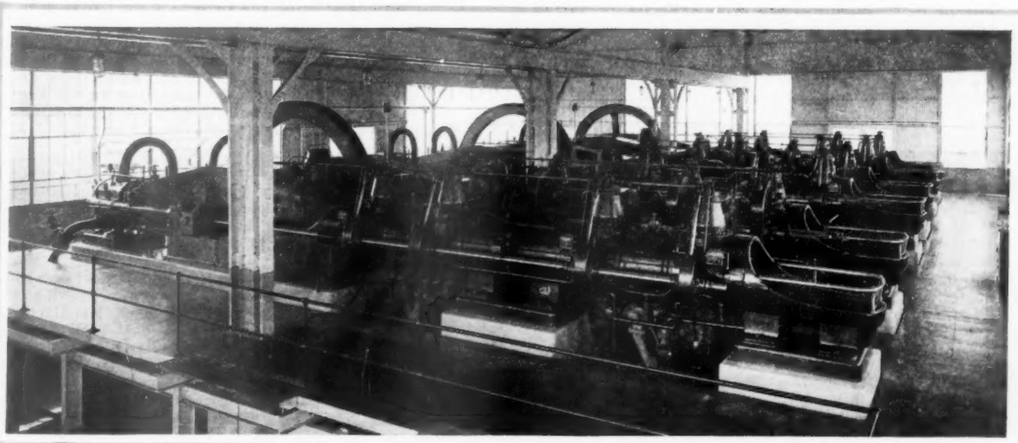


Three Cooper 1000 B. H. P. twin tandem gas engines direct driving gas compressors in Magnolia Gas Company's Mineola, Texas compressor station.

RELWAYS SAFE IN CHOOSING A COOPER

West Virginia Producer Leads in East

Geary District, Roane County, Completes 125-Bbl. Well. Perry County, Southeast Ohio, Has 60-Bbl. Producer in Deep Sand

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., May 13.—West Virginia furnished larger wells during the week than southeast Ohio or southwest Pennsylvania. Several months ago it was thought new pools had been discovered but as development work progressed they were found to be small and were soon defined. At this time there is no promising new producing territory in sight. Up to the present there has been no concerted effort made on the part of the wildcatter to go in search of strictly new producing territory. The work now under way and starting is in old territory, long since defined. There is not an operating company, large or small, that is holding what is known to be capable of furnishing even light pumpers, in reserve.

In an unknown locality some new congested pools will no doubt be discovered but they will be small and soon defined. In some instances more money will be expended than conditions will warrant. This was true last year in Green district, Wetzel County, West Virginia. The district that is now completing some good wells is Geary district, Roane County. In that district, the South Penn Oil Co. completed a test on the Alfred Fields farm. It flowed 125 bbls. the first 24 hours after drilled into the Big Injun sand. In the same district, the same company drilled down No. 91 on the O. D. Stocky farm from the Big Lime formation to the Big Injun sand which flowed 155 bbls. the first nine hours. Both wells are one location in advance of developments.

SOUTHWEST OHIO

On the Ohio side in the deep sand territory in Section 4, Harrison Township, Perry County, Crowley, Carr and others completed a test on the J. O. Guy farm which produced 60 bbls. the first 24 hours.

In the SW Section 24, Salisbury Township, Meigs County, the Big Six Oil & Gas Co. completed in the Berea grit on the Walter Cannon farm a very light pumper, less than a barrel a day. In Subsection, Chester Township, the City Trust & Savings Bank has a 5-bbl. pumper at No. 5 on the Wesley Genheimer farm.

In the SW Section 11, Clay Township, Muskingum County, the Far Union Gas Co. has completed in the Clinton sand a test on the W. A. Grant farm. It was a duster at a total depth of 3,750 feet. In Section 20, Sutton Township, Meigs County, Simon Lebow and others have completed in the Berea grit a second test on the Elizabeth Kreauter farm. It is a 4-bbl. pumper.

Dusters in Washington and Holmes

In Aurelius Township, Washington County, Jerry Buckley's second test on the B. W. and Audry Hupp farm is a duster in the Keener sand. In Section 5, Paint Township, Holmes County, the Logan Gas Co. has drilled in a test on the Henry Fritz farm through the Clinton sand to a total depth of 4,119 feet. It is a duster.

In the deep sand territory in southeast Ohio, in the NW Section 13, Washington Township, Hocking County, the Gordon Oil Co. completed No. 5 on the Frederick Thrush farm. It is a 12-bbl. pumper in the Clinton sand. In Section 30, Ward Township, same county, A. H. Squire & Co. completed in the same formation No. 19 on the Cobb-Bradley farm. It was shot and failed to respond. If it makes a producer it will be very light.

In Jefferson Township, Noble County, Otto Poling and others have a duster on the L. L. Feldner farm. In the same township, the Cain Oil & Gas Co. had the same luck at No. 4 on the Alice Mullett farm. In Elk district, C. E. Stephens & Co. have a gasser on the Friend Roher farm.

In the deep sand territory in the NE Section 21, Harrison Township, Perry County, the Hopewell Fuel & Gas Co. completed in the Clinton sand its second test on the Margaret Veyon farm. It is a duster. In Hopewell Township, the Wittmer Oil & Gas Properties has a duster in the same formation on the J. J. Allen farm.

In Section 8, Fallsbury Township, Licking County, the Emerald Petroleum Co. has a show for a 15-bbl. pumper in the Berea grit on the Jacob Weise farm. In the same section, the same company is drilling on the J. A. Little farm. In Section 22, Elk Township, Noble County, B. C. Robinson and others have a 5-bbl. pumper on the Frederick Springer farm. In Franklin Township, Monroe County, Myers, Gerber & Co. are drilling on the J. L. Curtis farm.

Morgan County

Two miles south of Chesterhill, Section 13, Marion Township, Morgan County, W. S. Harris has completed in the first Cow Run sand No. 5 on the W. S. Harris farm. It is probably a 3-bbl. pumper. Three miles west of Chesterhill, in Fractional Section 24, same township, Charles Woodyard & Co. drilled No. 8 on the Charles Woodyard farm through the same formation. It is very light, a half-barrel pumper.

At Boling Mills, Section 6, Vinton Township, Vinton County, Townsend and others have completed in the Berea grit a duster on the Elmer Fetty heirs' farm.

In the NE Section 11, Sutton Township, Meigs County, the Twenty-Five Association, Inc., completed in the Cow Run sand No. 8 on the William Carnahan farm. It produced 20 bbls. the first 24 hours after shot.

In the S half Section 280, Franklin Township, Monroe County, Myers, Gerber and others completed their test on the E. O. Curtis farm. It is a 3-bbl. pumper in the Maxon sand. In Section 6, Paint Township, Holmes County, the Ohio Fuel Gas Co. has completed in the same formation a test on the John J. Hersberger farm. It is a gasser good for 250,000 feet.

WEST VIRGINIA

On the Kanawha River, Center district, Calhoun County, G. W. Hamilton has completed in the Big Injun sand his test on the Annie V. Stalnaker farm. It is a gasser good for 250,000 feet. In Sheridan district, same county, M. F. Crowley's test on the W. H. Maze farm is a gasser in the Big Injun sand. In Center district, the Sycamore Fuel Co.'s test on the Hardman-Stalnaker farm is a gasser in the same formation. In Sherman district, same county, the Hope Natural Gas Co. has a gasser in the Big Injun sand at No. 7,250 on the Addis Gainer farm.

In Geary district, Roane County, the United Fuel Gas Co.'s No. 2,595 on the W. W. Ogden farm is a gasser. In Jefferson district, Lincoln County, Earl Cameron's second test on the J. A. Stone farm is a gasser in the Berea grit. In Williams district, Wood County, Athey & Stewart have a duster on the A. C. Athey farm.

In Duval district, Lincoln County, the South Penn Oil Co. has completed in the Big Injun sand No. 4 on the Lafayette Alford farm, showing for a 4-bbl. pumper. In Mannington district, Marion County, Monroe & Laughlin have completed in the Fourth sand a second test on the W. T. Morris farm. It is a fair gasser.

Dry in the Fifth Sand

In McElroy district, Tyler County, the South Penn Oil Co. has completed No. 4 on the Joshua Haught farm. It is dry in the Fifth sand but will be filled up to the Big Injun sand and tested. A show of oil was developed in this formation but they went on to the lower sands. In Curry district, Putnam County, the Dunbar-Charleston Gas Co. is drilling on the Addison Wiseman farm. In Church district, Wetzel County, the Manufacturers Light & Heat Co. is rigging up on the Elizabeth McHenry farm.

On Phillips Run, Center district, Calhoun County, the Hope Construction & Refining Co. has a light gasser in the Big Injun sand on the Clinton Schock farm. In Union district, Clay County, the Hamilton Gas Co. completed in the Big Injun sand a test on the H. P. King farm. It is a light gasser.

In Otter district, Braxton County, the United Gas Co. has a duster in the Gordon sand on the Israel Engle farm. In Murphy district, Ritchie County, the B. F. Miller Farm Oil Co.'s test on the B. F. Miller farm is a duster.

On Leatherwood Creek, Big Sandy district, Kanawha County, the United Carbon Co. completed in the Weir sand No. 22 on the Osborne farm. It is a gasser good for 200,000 feet and is spraying 1 bbl. of oil a day. On Mayburry Run, Murphy district, Ritchie County, the Daniel O'Day estate and others have drilled their old salt sand gasser on the Vincent Morris farm through the Big Injun sand. It is dry in the lower formation.

Marion County

On PawPaw Creek, PawPaw district, Marion County, Harry Tennant has a fair gasser in the Fifth sand on the E. Brewer farm. Drilling deeper oil wells is still a feature in some localities. In Center district, Wetzel County, Burley & Orndoff are drilling to the lower sands on the Charles Pyles farm. In the same district, the Chesebrough Manufacturing Co. is drilling down on the H. H. Antill farm. In Church district, the Manufacturers Light & Heat Co. is drilling down No. 1 on the William Renner farm. In Cameron district, Marshall County, the same company is building the rig for a second test on the R. S. Winters farm. In Clay district, Wetzel County, the Pittsburgh & West Virginia Gas Co. has started to drill on the Lula L. Clarkson farm. In Union district, Ritchie County, the Hope Construction & Refining Co. is drilling on the C. P. Zinn farm.

Roane County

Roane County has quite a little new work under way and starting. In Geary district, the United Carbon Co. has started to drill on the C. H. Harold farm

(Continued on Page 103)

OHIO AND DAVIESS COUNTIES GET BEST KENTUCKY WELLS

By Whit
Staff Correspondent, Kentucky-Tennessee

OWENSBORO, Ky., May 13.—Western Kentucky oil operators were given a nice surprise when the Ohio Oil Co. announced a 15-cent raise in crude handled through the Illinois Pipe Line Co.'s lines in western Kentucky. This is the best price paid for oil in the field in two years, before which it had been for some time as high as $2.25, gradually dropping back until the low price of $1.33 was reached. This price was boosted a year ago by 15 cents and later by another advance of 15 cents to $1.63. The next change which was but a short time ago was a drop of 10 cents bringing the price to $1.53 and the advance made on April 26 of 15 cents put the present market price to $1.68.

The past few days has seen a revival in field work and with good weather a large amount of development work will be done, not alone in the drilling of defined territory, but of the wildcat order as well.

With at least three gas lines under consideration from the gas fields to Owensboro, the drill must be kept going to supply the gas. The Missouri-Kansas Pipe Line Co. has started a test for gas on a block of acreage not far from Owensboro, the well being in the northeast portion of the Whitley farm, on the Hartford Road, and will add additional strings of drilling tools as soon as they can be moved in.

The Illinois Pipe Line Co. has started laying an oil line toward the Ohio Oil Co.'s discovery well on the Kennedy farm, about 2½ miles south of Greenville, in Muhlenburg County. Whether the line will be from Greenville to the well or from the well to the Illinois Pipe Line Co.'s trunk line in Kentucky has not been announced. Greenville is slated to get a big play by oil operators during the next several months, as a result of the showing made by the Ohio Oil Co.'s well on the Kennedy farm. Oil operators are shipping tools and rigs to the Muhlenburg County seat so that more drilling may get under way soon. This is much deeper territory than that being developed in the Owensboro-Hartford division of the western Kentucky fields.

Week's Work

A summary of operations in the Kentucky fields show 31 completions, 15 producers with an initial production of 885 bbls.; 13 dry holes and 3 gas wells.

County—	Comp.	Oil wells	Prod.	Dry	Gas
Daviess	17	8	250	8	1
Ohio	7	6	625	1	0
Warren	3	1	10	1	1
Hopkins	1	0	0	1	0
Allen	1	0	0	1	0
Clay	1	0	0	0	1
Lee-Owsley	1	0	0	1	0
Total	31	15	885	13	3

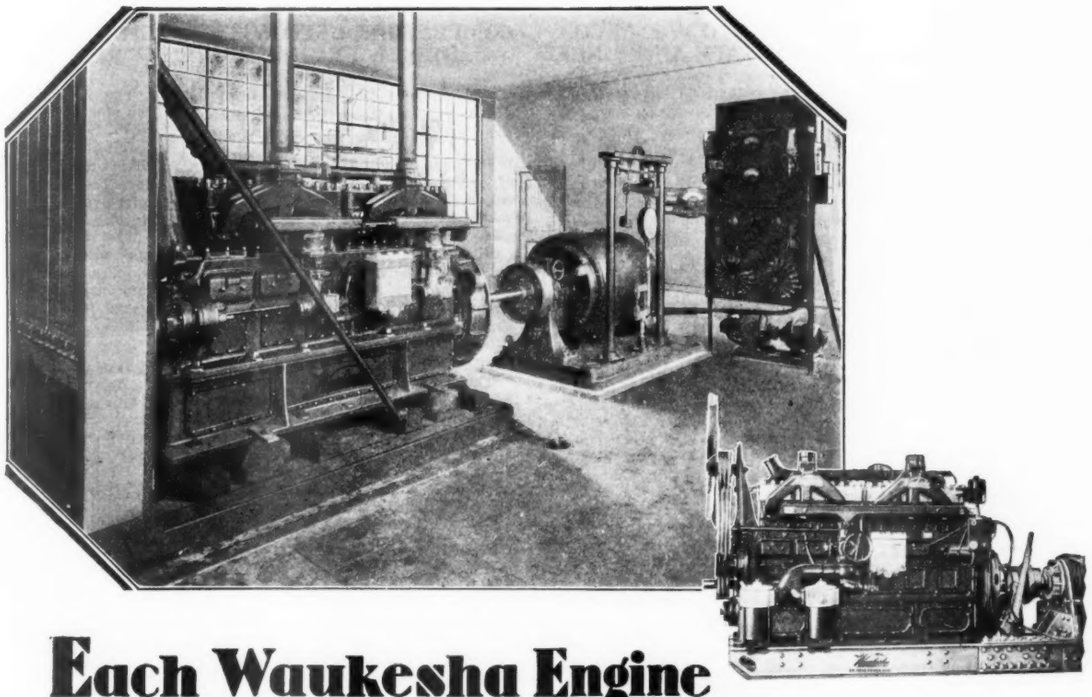
Daviess County Wells

One of the best of the late wells in Daviess County, is the Trognite Oil Co.'s No. 4 on the H. B. Trodgen 85 acres, in the Red Hill district, reported with an initial around 100 bbls. Jetsan Oil Co.'s No. 4 on the Big Hinton farm, in the Jones Pool, is reported at 30 bbls., the contract work being done by W. W. McMahan.

The Petroleum Co.'s No. 14 on the C. L. Burns, near Utice, in the Brown Pool is a 30-bbl. initial producer, with No. 15 under way. Smith, Randolph and others' Nos. 3 and 4 on the Whitesville Bank land, in the Jones Pool, are reported at 20 and 25 bbls., respectively. Eastern Gulf Oil Co.'s No. 7 on the M. C. Ruby 125 acres, in the Red Hill Pool, is good for 15 bbls.

Smith and Fishers' No. 3 on the J. W. Thomas 22 acres, is a 15-bbl. well, as is Rowe and Randall's No. 2 on the Harry Simmons lease. McMahan and Dalhren's test on the Black lease, south of the Burton Pool, is a dry hole. Daley and Loman's Nos. 6 and 7 on the R. E. Bur-

(Continued on Page 100)



Each Waukesha Engine Must Deliver Its Rated Capacity

EACH Waukesha Engine is thoroughly tested before being shipped. The latest and most accurate type of cradle dynamometer and other precision equipment insure that every engine sold will meet its published performance . . . every oil field service requirement within its power range.

Sizes up to 275 hp. are used for drilling with standard cable tool rigs . . . drilling with rotary rigs . . . operating mud pumps on rotary rigs . . . pulling rods, tubing and casing . . . for cleaning and swabbing wells . . . pumping oil . . . powering trenching machinery . . . driving compressors for gas lift stations . . . as power for water pumping stations, "casing head gas" plants and electric generation plants for lighting, welding and power.

Manufacturers of gasoline-powered equipment who are most careful of their reputation use Waukesha Ricardo Head Engines. Write for booklet. Oil Industry Equipment Division, Waukesha Motor Company, Waukesha, Wisconsin. Offices: New York, Tulsa, Houston, San Francisco.

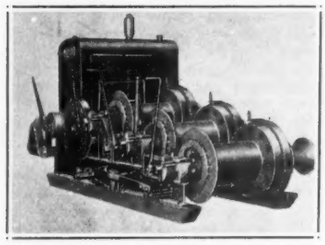
942

WAUKESHA RICARDO HEAD ENGINES

EQUIPMENT AND SUPPLIES

NOVO DESIGNS A HOIST FOR LOADS TO 3½ TONS

A new hoist, the WH, has been designed by the Novo Engine Co., Lansing, Mich., for handling loads up to 3½ tons. The standard line speed is 250 feet per



minute, the greater loads, of course, being handled at lower speeds. A special high-speed one-drum hoist is included in the series that has a line speed of 480 and 520 feet per minute and a load capacity of 1,500, 2,300 and 2,700 pounds. The regular hoists are manufactured in one, two and three-drum units.

Strength and rigidity have been achieved by constructing the frames, gears, ratchets and pawls of Novite, an alloy perfected by the Novo Engine Co. To remove danger of the base warping and the gears and bearings twisting from line the Novo all-welded steel base is used. Electric welding of each joint unites the base parts into a rigid one-piece unit. Further to insure rigidity, spreaders are tubular.

BROWN ENLARGES PLANT

Although the Brown Instrument Co. completed the construction of a two-story addition to its Philadelphia plant less than a year ago, the rapid growth of business has necessitated another addition. A one-story wing of the plant will be demolished and a new two-story and basement building will be erected on the site. Also a new central wing of two stories and basement will be constructed. The cost of the new buildings will be approximately $200,000. This is the fourth addition the Brown Instrument Co. has made to its plant in eight years.

BUYS FOUR OTHER CONCERNS

The Sullivan Co., Memphis, Tenn., and Montreal, Canada, manufacturer of Konset, Slush-Mix and Kleen-a-Well, has increased its capital stock and taken over the Paint Products Co., Cement Products Co., Bailey-Hehnen Co. and the George M. Tagg Paint Co., all of Memphis. The new officers of the company are F. Daly Sullivan, president; D. P. Estridge, vice president, and M. L. Wall, secretary-treasurer.

DIAMOND T MAKES CHANGE

C. A. Tilt, president of the Diamond T Motor Car Co., Chicago, has announced the appointment of E. A. Haskins as general service manager. Mr. Haskins, a graduate automotive engineer, was formerly with the Hercules Motor Co. T. C. Huxley, Jr., eastern sales manager, has been made a vice president of the company also.

STORY OF FLYING FIELD TOLD

"Getting on the Air Map With 'Caterpillar' Tractors," a book just off the press, tells how a flying field comes into being, along with a set of airport building photographs. The treatment of the subject is brief and each step is concisely dealt with.

ADDITIONS TO W-K-M CO. FIELD STAFF ANNOUNCED

Accessions to the field sales staff of the oil field division of the W-K-M Co., Inc., Houston, Tex., are E. W. Hobson, formerly with the Durant Motors Co. and the White Motor Truck Co., and W. L. Martin, formerly with the Frank B. Crowell Co.

Mr. Hobson will have charge of the W-K-M Co.'s new production equipment demonstrator, a 3-ton truck outfitted with all the production devices manufactured by the W-K-M Co. The demonstrator is to be routed through Oklahoma, Kansas, Texas, Louisiana and Arkansas fields and may be sent to Rocky Mountain areas. Mr. Martin, for many years drilling and production superintendent for Mid-Continent oil companies, has been assigned to special sales work in the Semiñole district for the time being, with likelihood that he will be shifted to permanent territory soon.

Lee J. Hewitt, formerly shop superintendent of the Williams Iron Works, Tonkawa, Okla., has been made assistant shop superintendent for the W-K-M Co. Paul T. Putnam, formerly advertising manager, has been made sales manager of the oil field division. His headquarters will be in the Houston office, but he will spend much time in the field.

NOISE FROM MOTOR REDUCED

The Wagner Electric Corp., St. Louis, Mo., announces a new motor, the R.A.R., developed especially for applications requiring quiet performance. The motor proper is insulated from the supporting cradle-shaped base by rubber bushings, effecting an exceptionally quiet motor suited to places where noise is objectionable.

COMPRESSOR USED WITH DIESEL ENGINE DRIVE

The economy of oil-engine drive for certain classes of construction and industrial equipment is recognized, and the variety of equipment utilizing this type of prime mover has increased. Sullivan Angle compound compressors lend themselves to Diesel engine operation. The sizes in which these compressors are built range in capacity from 400 to 2,600 cubic feet of free air per minute, and their operating speeds permit direct connection to stock sizes of popular Diesel engines accurately, and with distinct advantages in economy and adaptability to numerous operating conditions.

The Sullivan Machinery Co., Chicago, has just published a new booklet, No. 83-L, entitled "Sullivan Angle Compound Air Compressors Direct Connected to Diesel Engines." It gives illustrations of Diesel engine compressor plants which have been installed in all parts of the country for different kinds of service.

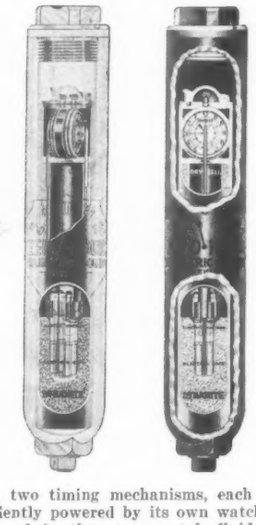
FLOOR UNITS READY FOR USE

Kerlow steel flooring, manufactured by the Kerlow Steel Flooring Co., Jersey City, N. J., is shipped from the factory in units which are ready to be dropped into place like ordinary planks. Fastening devices are sent with the units, so that no drilling of holes in the supporting structure is necessary. Four standard designs are made in 13 thicknesses, from three-quarters inch to 2½ inches. All are made of steel or nonferrous alloys to resist corrosion. They are of grating construction and finished on both sides so that they may be reversed when either side becomes worn. They are described by the manufacturers as fireproof, rigid, nonslip and self-cleaning.

CHANCE OF FAILURE IS REDUCED BY NEW BOMB

The Zero Hour Torpedo Co., Tulsa, has placed on the market its latest model bomb, the Duplex. Its earlier models, embodying a single watch and one electric circuit through two electric blasting caps, have been used for exploding "shots" of nitroglycerin in oil wells throughout the world.

The new Duplex model, though of the same size as earlier models, contains two watches, each connected through a separate circuit to two blasting caps, connected together in parallel. Thus, in effect, two timing mechanisms, each independently powered by its own watch, are enclosed in the same metal, fluid-tight, container which formerly held one only.



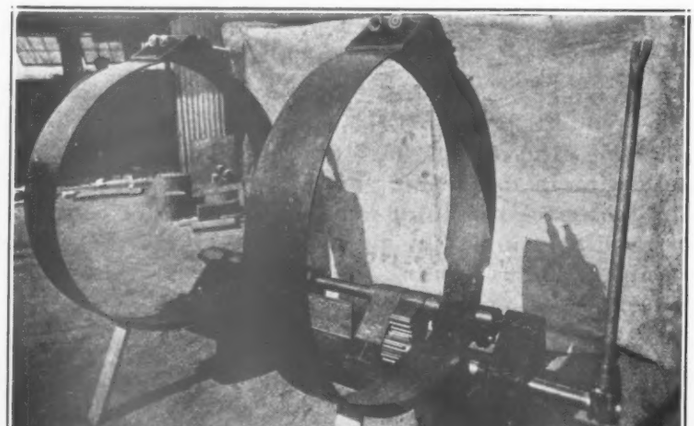
The manufacturer points out that when the new Duplex timing mechanism has been loaded and sealed in its metal container, the possibility of failure to function is infinitesimal. They refer to three highly improbable combinations of circumstances necessary to effect a failure, namely: Stoppage of both watches, defectiveness of all four blasting caps, stoppage of one watch and the defectiveness of both caps connected to the other watch.

Among new features is an improved spring contact or "firing pin" which permits the hour hand of the watch to be moved past it, either forward or backward any number of times, as in testing, without variation of the firing time from the zero hour, at which the pin was originally set. Another is incorporation of "plug and socket" connectors for connecting the blasting caps to the timing mechanism. The sockets are built into the mechanism. To the plugs two electric igniters are connected in parallel at the Zero Hour factory.

TIEMAN IN CHARGE OF PLANT

Fred Tieman is in charge of the Reed Roller Bit Co.'s new plant at Lake Charles, La., built for the purpose of further servicing Barrett-Robishaw drilling-core bits and other equipment handled by the company in that territory. Mr. Tieman was educated at Syracuse and Cornell Universities. During the war he served as instructor in flying and was commissioned a lieutenant. Following his discharge from the service, he worked on a ranch for one year as assistant manager and as manager the second year. He then started in as roughneck and worked at oil field jobs until he became connected with the Ged Iron Works' machine shops, where he remained until he joined the Reed Roller Bit Co. this year.

GEARING PRINCIPLE APPLIED TO DRAW-WORKS BRAKE



With holes going down deeper and deeper there is a growing necessity for a draw-works brake that will have more braking surface, provide greater leverage, and at the same time cut down the danger of the "kick back."

The MacClatchie Manufacturing Co., of Compton, Calif., manufacturer of oil well tools, and originator of the "Panther" aviation engine, has introduced a brake to meet this problem. The chief individual feature is that it is geared 2½ to 1.

Engineers associated with J. W. MacClatchie, owner of the company, spent months devising the geared brake, many of which have been installed in near-by oil fields. Although it can be installed on any draw-works, the MacClatchie geared brake is individual in design. The pressure applied to the arm is multiplied 2½ times by the gears below the shaft on which the bands are placed.

From the gears the pressure is applied to the bands, which completely surround the drum, offering great braking surface. These bands are adjusted easily from a standing position on the rig floor, as the adjustment bolts, two to each band, are at the top of the drum.

ROCKY MOUNTAIN AREA

(Continued from Page 53)

in lime and running 6¼-inch to shut off water. The section shows so much less salt and more shale, sand and lime than the discovery well to the south that it was decided recently to drill considerably deeper. The same company's No. 1 King, SE Section 13-23-20, on the Salt Valley Dome, is shut down at 3,800 feet waiting for 6¼-inch casing, which will be run and carried. The hole has been troubled considerably with heaving shale which came up to meet the tools and it was decided to close down until the casing could be run.

COLORADO

A development of more than the usual interest took place the past week in the south extension of the Florence Pool in Fremont County, Colorado, when Raddatz, Vogel & Travis' No. 20, SE NE NE Section 33-20-69, topped the Dakota sand and encountered water testing 86 per cent salt. The sand was drilled only a short distance when the water rose to within 100 feet of the top and it was decided to abandon the hole. The total depth was 4,545 feet. The hole was too small to continue to the Sundance, the objective, as it was started with 8¼-inch casing and had been reduced to 5 3/16-inch at 4,200 feet. The significance of the discovery lies in the fact that salt water was encountered in the Dakota, that horizon being preeminently a fresh water sand. The Florence Pool is the second oldest producing field in the country, and the oil comes entirely from the Pierre shale in a structural basin. More than 1,000 wells have been drilled and the pool has produced more than 12,000,000 bbls. of oil. Until recent years it was believed the oil was migrating from some undiscovered structure, but later investigations resulted in the conclusion that the oil originated in the shales in the basin. The Dakota carried fresh water in the few deep tests drilled in the pool proper.

In 1924 the Continental Oil Co. drilled two wells in Section 9-20-69, about 6 miles south of the old pool, and opened up what became known as the south extension. These wells averaged 70 bbls. a day over a period of 9 months. The Travis-Raddatz interests acquired extensive acreage in the new district and has carried on a drilling campaign for several years. The firm's No. 20, located 12 miles south of the center of the old pool, was spudded in last fall. Recently it was decided to carry it down to test the Dakota, Morrison and Sundance horizons, which have never been drilled in the south extension, with the results already noted. The finding of salt water in the Dakota is accepted as pointing to the existence of a closed structure in that area and at a later date the firm intends to drill another deep test to go to the Sundance, expected at around 5,500 feet. The outcome of another test will be watched with considerable interest, as it may reveal the source of the shale production in the old field and the south and west extensions.

Wildcat Near Denver

A wildcat near the city limits of Denver, the Ruby Hill Oil & Gas Co.'s No. 1 Braden, SE cor. Section 24-4s-69, in Jefferson County, attracted considerable attention this week when it had a show of gas at 1,945 feet. The quantity was sufficient to burn a flame about 3 feet above the bailer for a few seconds when water was brought up. The 8¼-inch casing, which is being carried, was lowered and a water shutoff made. Another sand was topped at 1,965 feet, believed to be the second member of the Foxhills. It did not contain any water, the first sand so far cut that was dry. On the contrary, it had distinct showings of oil and gas. A tablespoonful of the sand was given the chloroform test and yielded several drops of crude. While tests of the gas had been made to see if it would burn when lighted prior to topping the second sand, it was decided that the new show was too strong to take the risk of touching a match to it.

The High Line Oil Syndicate's No. 1 Peerless, NE cor. Section 23-8s-104, in Mesa County, on the western slope, cut a hard sand—too hard to hold oil—at 2,655-70 feet and then went back into shale and bentonite and is drilling at 2,680 feet. The formation is changing and it is believed the bit is entering the Dakota. This well had excellent showings of oil and gas in the Frontier.

In Jackson County, in the northern part of the state, the Midwest Refining Co. is making a location for a test on the Buffalo Creek structure in the NW Section 9-6n-80, about 3¼ miles east and three-fourths of a mile south of the Producers & Refiners Corp.'s No. 1 Hendershot, SE NE Section 2-6n-81, on the Pole Mountain structure. The Producers & Refiners' well has been shut down at 1,900 feet since last winter, but is preparing to resume when weather conditions are favorable. These two wildcats are 25 miles southwest of the Continental Oil Co.'s operation at Walden, with the North Park anticline intervening.

Vineland Disappointment

The Vineland district southeast of Pueblo had another disappointment this week when the Continental Oil Co.'s No. 1-A Shaw, SE NW NW Section 3-22-63, ran into water in the Dakota at 1,240 feet, the fluid rising to within 200 feet of the top. It is being drilled ahead and at last reports was bottomed at 1,264 feet. This well is only 30 feet south of the Rozella No. 1 Shaw, which more than 3 months ago started an extensive drilling campaign in that area. The so-called discovery well bailed considerable oil at several intervals but was never tested and was junked a few weeks ago and abandoned. So far none of the wells drilled in that area have produced any oil in commercial quantities and with one or two exceptions, the Dakota has carried water. One of the exceptions is the Security Oil Trust's No. 1 Bush, SW NW NW Section 14-22-63, which is shut down at 1,053 feet waiting for a shooter. It is reported this well topped the Dakota at 1,030 feet and found a considerable showing of oil and no water, though the oil was not in commercial quantities. There are indications of a faulted condition in the field and there may yet be a turn in the field's fortunes. C. W. Sheffer's No. 1 State-Lubers-Oliver, NW SE Section 4-22-63, is shut down at 1,308 feet. It is flowing water from the Morrison, the water in the Dakota being cased off. The Apex Oil Syndicate's No. 1, C NE Section 35-21-63, is drilling at 1,100 feet. It is claimed that this well, which is about 5 miles to the south of the discovery, had salt water at 50 feet and 240 feet, the water being fresh in these horizons in the other wells. The Nordic Oil Syndicate's No. 1 Carr, C SW SW Section 13-22-63, is drilling at around 1,300 feet.

Moffat County

In Moffat County, the Texas Production Co.'s No. 11 Knowlton, SE cor. Section 33-5n-91, on the Moffat Dome, is flowing around 200 bbls. a day, and swabbing around 680 bbls. from the Sundance at a total depth of 4,575 feet. The well is producing through the 6¼-inch casing and probably will do better when tubed. There is not much gas pressure back of the oil. The same company's No. 5 Wick, NW Section 10-4-91, is still bottomed at 4,851 feet and waiting for cement to harden. The 4¾-inch was cemented at 4,837 feet. On the Iles Dome, the Texas Production Co.'s No. 36 Lloyd, SE cor. Section 21-4n-92, is drilling deeper at 3,673 feet in the Sundance after stopping to swab for a test. The Midwest Refining Co.'s No. 24-SD Parkinson, SE NW Section 22-4-92, is drilling at 3,465 feet in the second Morrison sand. Thomas McLaughlin and others' No. 1 Williams, NW SW Section 2-3n-92, in the fault area south of the dome, is drilling at 3,480 feet, probably in the Mowry shale, and is carrying the 8¼-inch. The Texas Production Co.'s new test, No. 1 Berlin, SW SW NE Section 19-12n-100, Bartram Dome, has material on the ground.

In Routt County, the Texas Production Co.'s No. 4 Belle Dennis, NE SE Section 7-6n-86, a test to the Sundance on the Tow Creek structure, is coring at 4,502 feet. The same company's No. 1 State-Oliver, NE SW Section 18-6n-86, which has been idle for some time at 3,165 feet, is resuming and will be drilled to around 3,650 feet unless oil is encountered in the meantime.

In Fremont County, the Continental Oil Co. is starting another well in its No. 4 Vezetti, NE NE Section 11-19-70, in the Canon City district.

Larimer County

In Larimer County, northwest of Fort Collins, the Poudre River Oil Co.'s No. 1 Warren, NE cor. Section 33-8n-69, which has had more than the usual share of bad luck, has succeeded in clearing the hole of tools, cable and miscellaneous material, has effected a water shutoff by underreaming and lowering the 4¾-inch, and is preparing to drill deeper. It is bottomed at 3,599 feet in the Pennsylvanian and has a small show of oil in the bottom of the hole. A sand is expected within the next 25 to 50 feet. It topped the Muddy, producing horizon at Wellington, at 1,800 feet, or about 2,700 feet shallower than in the Fort Collins-Wellington Pools. The Continental Oil Co.'s No. 1 Fleming, SW NW Section 6-9n-68, Wellington Dome, the only active operation on that structure, is drilling at 1,080 feet.

In Elbert County, in the Denver Basin, the Belmont Oil Co.'s No. 1 Maher, NE SW Section 4-6s-59, in the Deer Trail district, is drilling at 3,385 feet and reported a considerable show of gas for the last 50 feet with a distinct odor of gasoline perceptible. Part of the gas horizon has been cased off with the 5 3/16-inch. J. M. Botts' No. 1 Buick, SE cor. Section 1-8s-59, the mystery well about which no information is given out by the owners, is reported shut down at around 3,600 feet. It is said this operation has had the tools in the hole for some time and is about ready to quit. Another well probably will be drilled at another location.

WYOMING

Wyoming took on some of its oldtime interest with the news from several wildcats showing a favorable turn. One of the most important developments was in the Midwest Refining Co.'s No. 1 Kirk, SE cor. Section 23-58-98, on the Frannie structure in Park County, near the Montana line. This well topped the Embar at 2,805 feet and filled up 1,500 feet with oil. The 8¼-inch casing will be set on top of the sand and cemented before drilling in. The well is about one fourth of a mile to the northwest of the Rosenberg No. 1, NE NW NW Section 25-58-98, which topped the Embar last fall at 2,588 feet and was completed at 2,612 feet. This was the discovery well on the structure, opening a new pool and averaging 350 bbls. a day of 28 gravity oil in the first week's test. The oil is a better grade than the Oregon Basin crude and has a gasoline content of about 23 per cent. Following this discovery, Peters & Kirk started No. 1 Kirk, one fourth of a mile to the northwest, and the Midwest began its No. 36 Rosenberg, SE cor. NW Section 25-58-98, the last named company having taken over the Rosenberg holdings. A deal later was made by the Midwest with Peters & Kirk for the drilling of that firm's well. At present it looks as if it will be about as good a well as the discovery, though it is approximately 200 feet lower on the structure. C. T. Lupton, who mapped the structure, gives the structure a closure of approximately 1,000 feet. Below the Embar is the Tensleep, Amsden, Madison and other possible producing horizons, the Tensleep, the most prolific horizon at Oregon Basin, not having been drilled on the Frannie Dome.

The Midwest's No. 36 Rosenberg, SE cor. NW Section 25, is drilling at 2,063 feet in red shale and should be an early completion. This area is scheduled for considerable activity. The Producers & Refiners Corp. has two operations under way on the Sage Creek, or South Frannie Dome, 3 miles to the southeast of the Frannie discovery. Its No. 1, SE cor. NW Section 7-59-97, is bottomed at 1,950 feet where it has been standing during the winter. Its other operation is rigging up and is in the NW NE SE Section 7-57-97.

Oregon Basin Field

There are signs of increased activity in the Oregon Basin Field in Park County. The Texas Company's new refinery at Cody was placed in operation formally on April 1, but since has been idle. While most of the field is shut in, it is understood all of the independent oil being produced in Oregon Basin is being run to market and is bringing 85 cents per barrel, the price set by the Bureau of Mines for government royalty oil. The Cody Petroleum Co. is reported running about 1,200 bbls. a day from its group of wells, but around 1,000 bbls. of this quantity is coming from one well, its No. 4 Klindt. The Producers & Refiners Corp. is building rig for its second well on Section 29-52-100, its No. 1 Owen, on the same section, having resumed the past week. This well is bottomed at 563 feet and is straightening hole at 500 feet. Charles E. Orchard's No. 5 Rue, NW SW Section 28-51-100, the third to be put down by this operator, is drilling at 1,200 feet.

Big Horn County

Big Horn County came in for its share of interest this week in the Cross Gas Co.'s No. 1, NE Section 23-56-97, on the Byron Dome. It topped a sand at 4,207 feet and less than 4 feet in commenced making some oil through a column of water. An attempt to bail the hole for a test was made, but was not successful on account of the 3,500 feet of water on the sand from an upper horizon. It was then swabbed for 24 hours and 300 to 400 bbls. of oil was put onto the ground, but the test was not satisfactory on account of the water conditions. The 4¾-inch casing is being run to shut off the water so as to make a better test. The oil tested about 31 gravity and has a paraffin base. There is not much gasoline in it, but it may be suitable for cracking. It comes out of the hole thin as water, but congeals readily at a low temperature.

This structure, sometimes known as the Garland Dome, though the two are generally considered separate structures alongside of each other, is one of the largest in that area. The horizon in which the Cross well found the oil is not definitely identified, but is believed by some to be the Sundance. The structure is approximately 10 miles long and 3 miles wide and has a closure of 2,600 feet. It is considerably cut up by faulting. The Cross well is about half a mile east of the Byron-Union well, a big gasser drilled several years ago, and is about 150 feet higher on the structure. The Ohio Oil Co. has drilled some gas wells on the structure, and the Producers & Refiners Corp. is drilling its third well in the SW NW NW Section 24-56-98, joint with the Kinney-Coastal Oil Co. This well has been delayed at 2,708 feet for some time and at present a rotary is being rigged up in an effort to drill through a troublesome formation. In its No. 2, NW NE Section 24-56-98, the Producers & Refiners had a 4,000,000-foot gasser at 1,400 feet, after plugging back from 2,640 feet, where it had a bad hole. The Utah Southern Oil Co. has a well in its No. 3, NE cor. SW Section 29-56-97, which gauged 17,000,000 feet at 3,763 feet, total depth. It is believed that the oil has been trapped in some of the fault blocks and much of the drilling has been for the purpose of locating the proper area. In 1924 the Standard Oil Co. of California drilled four wells to test a faulted area in the south end of the structure in Section 31-56-97. One of these had an enormous gas pressure and sprayed considerable oil. The best well did not make better than 50 bbls. and at the depth at which it was found it was not considered commercial and the company pulled out. These shows were not, however, in horizons as deep as the one drilled into by the Cross Gas Co. The structure has been producing from shal-

low horizons for some time. The Allen Oil Co. had a small tract in Section 33-56-97, which produced more than 2,000,000 bbls. from the sandy shaly Frontier at around 800 feet. The Ohio Oil Co.'s No. 1 Easton, Section 33-56-97, in the vicinity of the Allen operation, is starting a deep test and has landed the 15½-inch casing at 106 feet.

Weston County

The third development out of the usual was in the Wyoming Drilling Syndicate's No. 1, NE cor. Section 15-44-64, on the Howard structure, in Weston County, in the northeastern part of the state. Last winter it shut down at 4,350 feet after penetrating the first Wall Creek, topped at 3,900 feet and 160 feet thick, on account of the 6¼-inch casing collapsing. It was bottomed in the break between the first and second Wall Creek sands. The first sand showed traces of oil and gas. Recently work was resumed, the derrick being replaced with a 120-foot rotary derrick and rotary tools being installed to clean the hole. When the casing was pulled with the intentions of sidetracking the 600 feet of collapsed pipe, it was found that 2,000 feet of light green oil was standing in the hole. It is believed the oil came from the bottom of the hole, which is just above the second sand. This is the first test to that horizon on the structure.

In Hot Springs County, the Texas Production Co.'s No. 1, NW SW Section 23-45-100, Skelton Dome, is drilling at 2,175 feet and carrying the 13⅜-inch.

In Fremont County, the Producers & Refiners' No. 7, SW NW Section 14-32-95, Sand Draw, is still bottomed at 2,917 feet and circulating the 6¼-inch to lower. This well is trying to test horizons below the big gas belt.

Carbon County

In Carbon County, the Ohio Oil Co.'s No. 10 Dickinson, Section 34-20-78, Rock River, is drilling at 2,030 feet, and the Producers & Refiners' No. 3, SE NW Section 2-19-88, Hatfield Dome, is bottomed at 4,003 feet and filling hole with salt water. The Producers & Refiners' No. 1, NE NE Section 14-25-89, Sherrard Dome, is bottomed at 3,053 feet, and underreaming the 8¼-inch at 3,030 feet. Same company's No. 7, Section 7-26-89, Wertz Dome, is bottomed at 3,510 feet and working on the 8⅝-inch at 3,489 feet.

In Sweetwater County, the Mountain Fuel Supply Co.'s No. 1 Humphreys, SW NE Section 2-12-101, is running 7⅝-inch casing at 3,550 feet. It was reported to have had 5,000,000 feet of gas at 3,450 feet. Same company's No. 1 Hay, Section 26-17-104, South Baxter Basin, is drilling at 225 feet, and its No. 1 Arnold, Section 24-19-104, Middle Baxter Basin, is drilling at 2,330 feet. The Producers & Refiners' No. 1, NE SE Section 26-20-104, North Baxter Basin, is bottomed at 3,525 feet with the 6¼-inch pipe frozen at 3,522 feet. The Vermillion Oil Syndicate's No. 1, SW cor. Section 16-12-99, Hiawatha Dome, is resuming at 620 feet after being shut down for the winter.

In Sublet County, the California Petroleum Co. is resuming in the LaBarge Field after the usual winter shutdown. It is starting Nos. 7-D and 5-L, both in Section 34-27-113. The California Co.'s No. 1 Wyss, NE SW Section 12-32-115, South Cottonwood, is drilling at 1,739 feet in blue and yellow sandy shale. In Uinta County, the California Co.'s No. 1 Union Pacific, Section 7-17-116, Muddy Creek, is drilling at 3,175 feet in red limey shale.

MONTANA

Montana came back at Wyoming's recent finding of two new oil fields with the discovery of a new pool only 7 miles from Great Falls. The U. S. Petroleum Co. drilled into a sand on the Black Horse Lake Dome at 1,150 feet and has a commercial well at that depth. The conservatives place the production at 50 bbls. and from that the figures go all the way to 1,000 bbls. The oil has a gravity of 33.7 and while it appears to be an asphaltic base, the chemists at Great Falls state there is a distinct trace of paraffin in the crude samples they examined. The oil is considered to be the same as the Pondera crude. The new well is located on Section 8-21-4e.

The Shell Oil Co. has officially entered the Montana territory by filing a statement of such intention with the Secretary of State. William Scanlon of Helena is the company's official agent. The firm will carry on a general oil marketing business in Montana, besides engaging in the drilling and producing end.

The Citizens Gas Co. of Shelby has applied to the State for a permit to extend its pipe line from Shelby to Conrad, a distance of about 25 miles, and serve Conrad with natural gas.

In the Pondera Field, the Midwest Refining Co. has a small producer on Section 9-27-4, and will shoot to try to increase the production. The well will do 5 bbls. natural. The Alice Oil Co. is spudding a well north of the Sontag Miller well, which is the farthest north in Pondera. The Alice Oil Co. expects to find an extension in this direction and the location of the new wildcat is over 3 miles from the heart of the field.

In the Sunburst Field, a flock of wells reached the sand though none of the wells brought in was out of the ordinary. The California Co., on the Smoke lease, Section 27-35-2, filled up with oil 1,000 feet when the pay was struck and is expected to make a 50-bbl. well. The Campbell Morton well on Section 13-34-2, is good for 25 bbls. and the Arcus Oil Co.'s No. 8 on Section 19-35-1 will make a 20-bbl. pumper. The Sunburst Oil Co.'s No. 1 Faunce is a 20-bbl. well and is located on Section 12-34-2. The Ohio Oil Co., on Section 2-35-2, on the Barr lease, drilled into gas and will make around 2,500,000 feet.

Roy Tarrant drilled in on Section 28-45-3, on the Ward lease and has a 15-bbl. well, the Marias River Syndicate has a new producer on Section 20-35-1 on the Zachor lease that will do about 20 bbls., and the P. M. K. Oil Co. has an average producer on Section 19-35-1.

ROCKY MOUNTAIN FIELDS
Daily Average Production Week Ending May 11

WYOMING	
Salt Creek	39,430
Frannie	30
Big Muddy	2,420
Oregon Basin	2,810
Byron	30
Dutton	10
Elk Basin	860
Ferris	20
Grass Creek	2,170
Greybull	.....
Hamilton	1,000
LaBarge	1,820
Lance Creek	270
Lost Soldier	3,290
Osage	730
Poison Spider	840
Rock River	2,550
Rex Lake	130
Lander	700
Simpson Ridge	50
Teapot Dome	60
Total	50,220
MONTANA	
Cat Creek	1,410
Kevin-Sunburst	6,490
Pondera	2,960
Lake Basin	80
Total	10,940
COLORADO	
Moffat	1,411
Fort Collins	2,296
Florence	1,117
Iles	994
Tow Creek	612
Boulder	25
Rangely	100
Total	6,555
NEW MEXICO	
Artesia	898
Cap Rock (Maljamar)	410
Hogback	270
Rattlesnake	132
Table Mesa	...
Total	1,710
Grand total	69,425

CALIFORNIA ENGINEERS ELECT

At the first spring meeting of the California section of the American Petroleum Institute Division of Development and Production officers for the present year were nominated as follows: Chairman, A. C. Rubel; vice chairman, W. W. Copp; secretary, Martin Van Couvering, and treasurer, W. F. Huff.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 40)

CULBERSON COUNTY

Deep Rock Oil Co. et al's No. 1 Kloh-Rumsey, 660 ft. S and 1,422 ft. E of NW cor. Sec. 33, Blk. 59, Twp. 7, T.&P.R.R. Sur. — Drlg. by tools 1,460 ft.

Hickey & Stiver's No. 1 C. O. Finley, 600 ft. N and 1,980 ft. W Sec. 20, Blk. 82 — Small oil show 1,331 ft.; pipe set 1,418 ft.; drlg. 1,920 ft.

W. S. Hillyer's No. 1 McGregor, C NW Sec. 14, Blk. 81 — Shut down 516 ft.

Scott & Dittman's No. 1 Miller, 1,160 ft. N and 2,480 ft. E Sec. 1, Blk. 97, Public School Land — Rainbow 1,056 ft.; 300 ft. sulphur water 1,725 ft.; shut down 1,800 ft.

EL PASO COUNTY

Sillex's No. 1 Malone, 2,200 ft. SW and NW Sec. 46, J. M. Day Survey — Shut down 1,010 ft.

EDWARDS COUNTY

A. M. Griffith's No. 1 Wardlow, Sec. 60, Blk. V-8, J. C. Clift Sur. — Drlg. 1,540 ft.

FISHER COUNTY

Bickerstaff et al's No. 1 McWhirter, 2,640 ft. E and 150 ft. N of SW cor. of Sec. 295, Blk. 2, H.&T.C. Sur. — Shut down 2,000 ft. for orders.

Cranfill & Reynolds' No. 2 Willingham, 1,980 ft. S and 2,310 ft. W of NE cor. Sec. 207, B.B.B.&C.R.R. Sur. — Fishing 3,486 ft.

Cranfill & Reynolds' No. 1 Fleming, 1,980 ft. S and 2,310 ft. E of NW cor. Sec. 207, B.B.B.&C.R.R. — Oil show 2,905 ft.; set 6-in. 3,160 ft.; shut down 3,218 ft.

Dunnegan Bros.' No. 1 T. Henry, 330 ft. N and E of SE cor. Sec. 21, George W. Burdett Sur. No. 322, but in Sec. 4, Robert Hibbett Sur. No. 331 — Drlg. 3,260 ft.

Gilliman-McMurray & French's No. 1 Cleveland, 781 ft. N and 1,336 ft. W of SE cor. Sec. 116, Blk. 2, H.&T.C. Sur. — Drlg. 3,240 ft.

Landreth Prod. Corp.'s No. 1 Cooper, 440 ft. SE of NE cor. NW Sec. 115, Blk. 1, H.&T.C. Sur. — Show oil 2,760-70 ft.; drlg. 3,510 ft.

Magnolia Pet. Co.'s No. 1 Lee, Sec. 357, 2,310 ft. from N and 4,286 ft. from W — Location.

Mesa Oil Co.'s No. 1 Griffin, 849 ft. N and 465 ft. E of NE cor. Sec. 20, School Land — Shut down 2,985 ft.

Roeser & Pendleton's No. 1 Haugh, 440 ft. S and 1,320 ft. E of NW cor. of SW of Sec. 191, B.B.B.&C.R.R. Sur. — Fishing 1,965 ft.

Texas-Phillips' No. 1 Hall, 330 ft. N and W of SE cor. Sec. 6, Blk. 20 — Drlg. 2,945 ft.; hole full water 2,825 ft.

White Eagle Oil & Ref. Co.'s No. 1 Hughes, 4,942 ft. S and 660 ft. W of NE cor. Cosby Sur. 220 — Drlg. 2,340 ft.

GARZA COUNTY

Emerald Oil Co.'s No. 1 J. S. Reed, 990 ft. W and 330 ft. N of SE cor. Sec. 135, Blk. 5, H.&C.N.R.R. Sur. — Drlg. 360 ft.

GLASSCOCK COUNTY

Chas. Daniel et al's No. 1 Meek, 2,310 ft. W and 1,600 ft. N of SE cor. Sec. 7, Blk. 34, Twp. 3s, T.&P. Sur. — Shut down 500 ft.

Gibson-Johnson's No. 1 Dean, 1,320 ft. S and E of NW cor. Sec. 2, Blk. 33, Twp. 2s, T.P.R.R. Sur. — Spudding.

Meriweather Oil Co.'s No. 2 McDowell, 1,492 ft. N and 150 ft. E of SE Sec. 35, Blk. 34, Twp. 2s, T.&P. Sur. — Hole full water 2,665 ft.; set 6-in. casing 2,700 ft.; shut down 3,875 ft.

World Oil Co.'s No. 1-C McDowell, 1,650 ft. S and 2,310 ft. W of NE cor. Sec. 21, Blk. 34 — Show free oil 2,335-51 ft.; total depth 2,398 ft.; pumping 11 bbls. hourly.

HOWARD COUNTY

Amerada Pet. Corp.'s No. 9 Roberts, 1,115 ft. N and 622 ft. W of SE cor. Sec. 128, Blk. 29, W.&N.W.

Amerada Pet. Corp.'s No. 10 Roberts, Sec. 137, Blk. 29, 990 ft. from N and 330 ft. from E — Location.

American Maracaibo Co.'s No. 5 Settles-C, 330 ft. S and W of NE cor. Sec. 6, Blk. 32, Twp. 2s, T.&P. — 300 qts. 2,212-27 ft.; total depth 2,285 ft.; top pay 2,210 ft.; shot 300 qts. from 2,212-27 ft.; preparing to pump.

California Co.'s No. 5 Roberts, Lease 2, 1,170 ft. S and 150 ft. W of NE cor. Sec. 156, Blk. 29, W.&N.W.R.R. Sur. — Shut down 1,883 ft.; top pay 1,849 ft.; est. 30 bbls.; putting on pump.

F. H. E. Oil Co.'s No. 11-B Dora Roberts, 1,700 ft. S and 2,310 ft. E of NW cor. Sec. 137, Blk. 29, W.&N.W. Sur. — Fishing 2,510 ft.

F. H. E. Oil Co.'s No. 5-D Dora Roberts, 2,310 ft. S and 1,650 ft. E of NW cor. Sec. 136, Blk. 29 — Set 6-in. casing 2,930 ft.; shut down.

Fuhrman Pet. Co.'s No. 1 Read, 2,310 ft. N and 330 ft. E of SW cor. Sec. 41, Blk. 32, Twp. 1n, T.&P.R.R. Sur. — Location.

Gibson & Johnson's No. 1 Read, 660 ft. N and W of SE cor. Sec. 47, Blk. 30, Twp. 1n, T.&P.R.R. Sur. — Drlg. 1,850 ft.

Green et al's No. 1 Slaughter, C SW Sec. 32, Blk. 31, Twp. 3n, T.&P.R.R. Sur. — Shut down 3,514 ft.

L. C. Harrison et al's No. 1 G. M. Podge Est., SE cor. Sec. 9, Blk. 30, Twp. 1s, T.&P. Sur — Top lime 1,825 ft.; show oil 2,972-74 ft.; hole full fluid 3,257 ft.; total depth 3,257 ft.; plugging back 3,000 ft.; shot 180 qts. from 2,855 to 2,920 ft.; pumping 8 bbls. oil and 4 bbls. water daily.

Humble O. & R. Co.'s No. 3 Clay, Sec. 138, Blk. 29, 1,650 ft. from N and 330 ft. from W — Location.

Magnolia Pet. Co.'s No. 2 Hyman, 1,320 ft. W and 1,220 ft. N of SE cor. Sec. 88, Blk. 29, W.&N.W. Sur. — Drlg. 630 ft.

Magnolia Pet. Co.'s No. 13 Dora Roberts, 2,440 ft. N and 1,650 ft. E of SW cor. Sec. 136, Blk. 29, W.&N.W. Sur. — Rigging up standard tools 2,927 ft. shut down.

Marland Prod. Co.'s No. 3 Clay-F, 250 ft. S and 660 ft. W of NE cor. Sec. 138, Blk. 29, W.&N.W.R.R. Sur. — Shut down 2,675 ft. with show oil 2,595-2,675 ft.

Marland Prod. Co.'s No. 1 Clay-I, 210 ft. E and 1,520 ft. N of SW cor. Sec. 127, Blk. 29, W.&N.W.R.R. Sur. — Drlg. 1,750 ft.

Marland Oil Co.'s No. 1 Clay-H, 330 ft. S and 990 ft. W of NE cor. Sec. 155, Blk. 29 — Location.

Marland Oil Co.'s No. 2 Clay-H, 990 ft. S and W of NE cor. Sec. 155, Blk. 29 — Location.

Moody Oil Corp.'s No. 11 Roberts E, 1,650 ft. S and W of NE Sec. 136, Blk. 29, W.&N.W.R.R. — Location.

Moody Oil Corp.'s No. 12 Roberts E, Sec. 136, Blk. 29, 1,650 ft. from N and 2,310 ft. E — Location.

Moody Oil Corp.'s No. 13 Roberts E, 2,310 ft. S and 2,260 ft. E of NW cor. Sec. 137, Blk. 29, W.&N.W.R.R. Sur. — Drlg. 2,601 ft.; top pay 2,571 ft.; bailing.

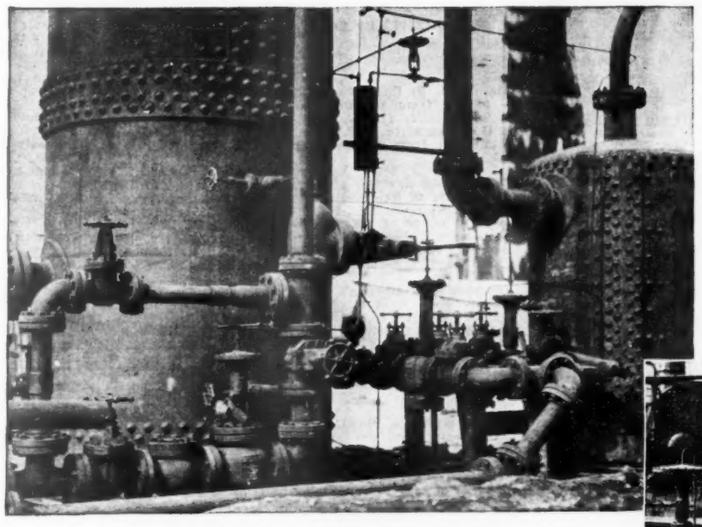
Peck et al's No. 1 Scrivner, 2,440 ft. S and E of NW cor. Sec. 12, Blk. 32, Twp. 2s, T.&P.R.R. — Drlg. 150 ft.

Plymouth Oil Co.'s No. 2 Kloh et al, 990 ft. S and 1,650 ft. W of NW cor. Sec. 5, Blk. 32, Twp. 2s, T.&P. R.R. Sur. — Top pay 2,236 ft.; swabbing.

Plymouth Oil Co.'s No. 3 Kloh et al, 1,650 ft. S and 990 ft. E of NW cor. Sec. 5, Blk. 32, Twp. 2s, T.&P.R.R. Sur. — Fishing 2,194 ft.; top pay 2,189 ft.; hole full oil.

Schermerhorn Oil Co.'s No. 6 D. Roberts-A, 1,650 ft. S and 330 ft. W of NE cor. Sec. 137, Blk. 29, W.& N.W.R.R. Sur. — Drlg. 1,275 ft.

Knowing How...

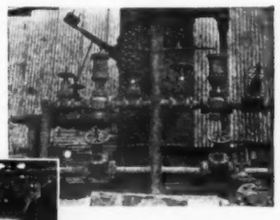


Connections for control of absorption tower near a producing well, from gasoline plant a mile distant

Six types of Wilgus Automatic Regulators

...N.G.E. Engineering Service

...the answer to any oil field pressure control requirement!

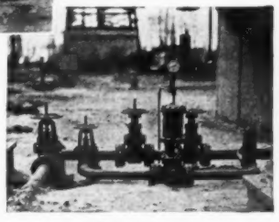


Above: Wilgus back Pressure Regulators for relieving gas systems of excess pressure

Below: Wilgus reducing Regulator for maintaining constant reduced outlet pressure

TWENTY YEARS of close contact with oil industry operations have developed a type of Wilgus Regulator to meet any of the wide variety of conditions requiring pressure control. N. G. E. Engineering Service affords experienced cooperation in the solution of any special problem.

Typical field installations of the six types of Wilgus Regulators are shown on this page.

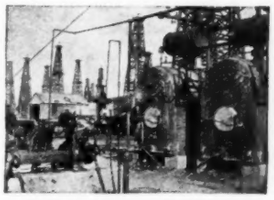


Above: Wilgus Gas Fuel Regulator

Below, left: Wilgus Pump Governor

Below, right: N.G.E, Gas Lift Control

The absorption tower pictured above is near a well, and is operated entirely by "remote control" from a gasoline plant a mile away. Two small lines for "fat" and "lean" oil connect tower and plant, in place of the 8" pipe line that would be required if the gas were conveyed from well to plant.



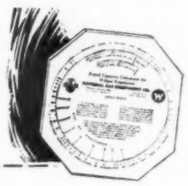
Complete data on these or any other installations on request. All types of Wilgus Regulators in stock for immediate delivery at Los Angeles or Tulsa.

NATURAL GAS EQUIPMENT INC.

Petroleum Securities Building, Los Angeles — *Atco Building, Tulsa, Okla.*

Wilgus Pressure Regulators and Governors
Anubis Differential Pressure Recorders
N. G. E. Low Pressure Gas Burners
N. G. E. Liquid Level Controllers
N. G. E. Gas Lift Control

Find capacities of Wilgus Regulators with the Rapid Capacity Calculator... free... send coupon below!



NATURAL GAS EQUIPMENT Inc.
Petroleum Securities Bldg., Los Angeles

Send . . . free . . . the Rapid Capacity Calculator and Wilgus Regulator data.

Name_____

Company_____

Address_____

Oil and Gas Journal, May 23, 1929

Superior Oil Co.'s No. 14 Dora Roberts-B, 2,310 ft. E and 280 ft. S of NW cor. Sec. 137, Blk. 29, W.&N.W. Sur. ... Shut down 200 ft.
Superior Oil Co.'s No. 15 Dora Roberts-B, 2,310 ft. S and 380 ft. E of NW cor. Sec. 137, Blk. 29, W.&N.W. R.R. Sur. ... Underreaming 2,565 ft.
Sweeney et al's No. 3 Chalk, Sec. 124, Blk. 29, 2,440 ft. from N and 2,440 ft. from W ... Drlg. 1,500 ft.
Ward Oil Co.'s No. 7 Roberts, 2,310 ft. N and 380 ft. E of SW cor. Sec. 137, Blk. 29, W.&N.W.R.R. Sur. ... Shut down 1,987 ft.

HUDSPETH COUNTY

American Land Co.'s No. 1 Lockhart & Roseborough, C SE Sec. 5, School Blk. 21 ... Drlg. 300 ft.
California Co.'s No. 1 University, 3,821 ft. N and 2,554 ft. E of SW cor. Sec. 19, Blk. E ... Set 16-in. casing 591 ft.; drlg. 976 ft.; straightening hole 976 ft.
Western States Oil Co.'s No. 1 Moore, C SE Sec. 16, Blk. 71, Twp. 6, T.&P. Sur. ... Straightreaming 2,700 ft.; total depth 2,865 ft.; fishing job.
Western States Oil Co.'s No. 1 Gardner & Moseley, NE NW Sec. 12, Blk. 18 ... Hole full water 2,945 ft.; underreaming 8¼-in. casing at 2,840 ft.; shut down 3,140 ft.; trying to pull casing.

IRION COUNTY

Fuhrman Pet. Co.'s No. 1 J. O. Suggs, Lease 1, C SE Sec. 3,024, Blk. 24, H.&T.C. Sur. ... Location.
Kimbrough & Flinchbaugh's No. 1 Tankersley, 160 ft. S and 200 ft. W of NE cor. Sec. 712, Ford Willig Sur. ... Shut down 1,329 ft.; show oil 1,318-29 ft.
Kimbrough & Tuel's No. 1 J. M. Nutt, 1,920 ft. S, 200 ft. E of NW cor. Sec. 5, Gonzales Co. School Land ... Set 6-in. casing 1,360 ft.; show oil and gas; shut down 1,400 ft.
Wesley West et al's No. 1 J. D. Suggs, SE NW SE Sec. 19, Blk. 7, H.&T.C. Sur. ... Top pay 2,368 ft.; swabbed 35 bbls. oil and 40 bbls. water; 35.8 gravity oil; show oil 5,480-83 ft.; show oil 5,660-70 ft.; drlg. 6,700 ft.

JEFF DAVIS COUNTY

J. K. Hughes Dev. Co.'s No. 2 Means, 1,622 ft. N line, 600 ft. W line Sec. 345, H.&T.C. Sur. ... Show gas 3,271 ft.; fresh water 3,000-05 ft.; underreaming 5 3/16-in. casing; drlg. 4,005 ft.; 600 ft. fresh water 4,000-26 ft.

JONES COUNTY

Condor Pet. Co.'s No. 1 McDonald, 340 ft. S and 240 ft. W of NE cor. Lot 59, G. A. Kirkland Sur. A-550 ... Drlg. 2,220 ft.
J. E. Brewer's No. 1 Goodman, 150 ft. N and E of SW cor. Sec. 15, Blk. 19, T.&P.R.R. Sur. ... Location.
Cosden & Herbert Oil Co.'s No. 1 Bickley, 320 ft. N and 310 ft. E of SW cor. S half NW Sec. 50, Blk. 18, T.&P. Sur. ... Rigged up and shut down.
Cosden-Herbert et al's No. 3 Bickley, 330 ft. N and W of SE cor. of S half NW Sec. 50, Blk. 18 ... Rig.
W. G. Clark et al's No. 1 Collins, 330 ft. S and E of NW cor. Sec. 29, Blk. 18, T.&P.R.R. Sur. ... Location.
W. G. Clark et al's No. 1 Dickenson, W 80 ac. of N 160 ac. of S 320 ac. out of H. B. Williams Sur. No. 273 ... Drlg. 1,825 ft.
P. K. French's No. 1 Lieson, 150 ft. N and E of SW cor. of E half NW Sec. 31, Blk. 14, T.&P.R.R. Sur. ... Drlg. 835 ft.
Grisham & Hunter Corp.'s No. 1 Hester, 330 ft. N and E of SW cor. of E half, Lot 12, Kratz Sur. A-247 ... Show oil 2,774-2,880 ft.; shut down 2,848 ft.
Humble Oil & Ref. Co.'s No. 1 Bickley, 330 ft. N and 200 ft. E of SW cor. of N half of S half of SW Sec. 50, Blk. 18, T.&P.R.R. Sur. ... Drlg. 2,320 ft.
Humble Oil & Ref. Co.'s No. 2 Bickley, 330 ft. S and W of NE cor. of SW Sec. 50, Blk. 18, T.&P.R.R. Sur. ... Rig
McGinley Corp.'s No. 1 Whittemore, 660 ft. N and W of SE cor. SE NE Sec. 39, B.B.B.&C. ... Shut down 1,720 ft.
McNeeley et al's No. 1 Roscoe Bland, 1,175 ft. N and 240 ft. W of SE cor. Subdivision 20, A-164, DeWitt Co. School Land ... Spudded and shut down.
Phillips Pet. Co.'s No. 3 Pomeroy, SW cor. of S 106 ac. SW Sec. 16, Blk. 19, T.&P.R.R. Sur. ... Total depth 2,265 ft.; underreaming 8-in. casing at 2,100 ft.
Phillips Pet. Co.'s No. 1 Walters, 990 ft. S and 330 ft. W of NE cor. N 80 ac. of W 160 ac. of NW Sec. 16, Blk. 19, T.&P. Sur. ... Drlg. 2,275 ft.
Sedgwick Oil & Gas Co.'s No. 1 Brown, 660 ft. N and 1,320 ft. E of SW cor. Sec. 9, Blk. 1, T.&N.O. Sur. ... Location.
The Texas Company's No. 2 Camp, 2,829 ft. N and 323 ft. W of SE cor. Camp 189.5-acre lease, Sec. 13, T.&P. Sur., Blk. 19 ... Swedging 8-in. casing 2,305 ft.; hole full water 2,030 ft.
The Texas Company's No. 3 Camp, 1,189 ft. S and 326 ft. W of NE cor. of Sec. 13, Blk. 19, T.&P. ... Drlg. 2,135 ft.
U. L. Tomberlin's No. 1 Horn, 1,980 ft. N and 660 ft. E of SW cor. of 502 ac. of Penney Sur. A-283 ... Drlg. 1,540 ft.
E. M. Treat Oil & Gas Co.'s No. 1 Hodge, 750 ft. S and 2,714 ft. W of NE cor. of S half A. Bell Sur. ... Drlg. 1,345 ft.
W. D. Wells et al's No. 1 Britton, 150 ft. N and 890 ft. E SW cor. 640-ac. tract, H.&W. Sur. 354-355 ... Shut down 900 ft.
White Eagle Oil & Ref. Co.'s No. 1 W. B. Teague, 933 ft. N and W of SE cor. Sec. 30, Austin & Williams Sur. No. 339 ... Drlg. 110 ft.

KIMBLE COUNTY

Lindsay Bros.' No. 1 Anderson, Sec. 167, 1,320 ft. from N and E ... Spudded and shut down.
McLean & Jamison's No. 1 Cannon, 1,940 ft. N and 300 ft. W of SE cor. Robert Cochran Sur. ... Drlg. 450 ft.

LOVING COUNTY

Lockhart & Co.'s No. 1 Hazell, 2,792 ft. SW of NE line and 660 ft. NW of SE line Sec. 84, Blk. 33, H.&T.C. R.R. Sur. ... Rigging up standard tools; S.D.
Lockhart & Co.'s No. 2 Hayzell, 320 ft. from NE and SE line of Sec. 84, Blk. 33, H.&T.C.R.R. Sur. ... Straightening crooked hole 330 ft.
Lockhart & Co.'s No. 2 Hubbard, 1,660 ft. from NE line and 330 ft. from SE line of Sec. 83, Blk. 33, H.&T.C.R.R. ... Top salt 718 ft.; drlg. 3,872 ft.
Lockhart & Co.'s No. 1 Johnson, 660 ft. S and 1,980 ft. W of NE cor. Sec. 20, Blk. 56, Twp. 1, T.&P.R.R. Sur. ... Shut down 1,380 ft.
Lockhart & Co.'s No. 1 Wheat-H, 990 ft. from NE and SE lines Sec. 85, Blk. 33, H.&T.C.R.R. Sur. ... Top salt 720 ft.; set 8¼-in. casing 2,295 ft.; drlg. 3,790 ft.

MENARD COUNTY

Cromwell & Duffey's No. 1 Winslow, C SE Sec. 32, T.&N.O. Sur. ... Set 15-in. casing 220 ft.

MIDLAND COUNTY

Phillips Pet. Corp.'s No. 1 Stokes, 440 ft. S and W of NE cor. S. Beall Sur. No. 101, Blk. 37, Twp. 2s, T.P.R.R. Sur. ... Drlg. 2,345 ft.; top salt 1,610 ft.
Shoupe et al's No. 1 Roy Parks, 1,320 ft. N and W Sec. 34, Blk. 41 ... Shut down 4,980 ft.; to deepen.

MITCHELL COUNTY

Harry Adams' No. 2 Ellwood, Sec. 15, Blk. 18, 1,170 ft. from S and 2,490 ft. from W ... Shut down 555 ft.
The California Co.'s No. 2 Clark Lease No. 2, 2,190 ft. N and E of SW cor. Sec. 14, Blk. 28, Twp. 1n, T.P.R.R. Sur. ... Drlg. 2,195 ft.
Ellis and Atlantic O. P. Co.'s No. 1 Elwood, 660 ft. N and E of SW Sec. 30, Blk. 18, S.P.R.R. Sur. ... Set 8-in. casing 618 ft.; 1,000,000 ft. gas 633-48 ft.; total depth 648 ft.
McGinley & Seiger's No. 1 Scott, C of NE of SW Sec. 36, Blk. 17, S.P.R.R. Sur. ... Shut down 730 ft.
Republic Prod. Co.'s No. 1 Scott, 330 ft. N and E of SW Sec. 20, Blk. 17, S.P.R.R. Co. ... Moving in material.
Simms Pet. Co.'s No. 1 Elwood, C SE of Sec. 29, Blk. 18, S.P.R.R. Sur. ... Underreaming 10-in. casing 1,671 ft.; drlg. 3,500 ft.
Simms Pet. Co.'s No. 1 Elwood-A, 660 ft. S and E NW cor. Sec. 33, Blk. 18, S.P.R.R. Sur. ... Drlg. 1,400 ft.
Spence et al's No. 1 Brown, 2,040 ft. E and 1,320 ft. S NW cor. Sec. 37, Blk. 25, T.&P. ... Drlg. 525 ft.
Texas & Wheeler's No. 1 Radford, 1,320 ft. N and W of Sec. 1, Blk. 27, T.&P. Sur. ... Shut down 3,965 ft.
Westyde Investment Co.'s No. 1 Elwood, C SW Sec. 33, Blk. 16, S.P.R.R. Sur. ... Location.
Wilson et al's No. 1 Elwood, 330 ft. S and W NE cor. Sec. 54, Blk. 18, S.P.R.R. Sur. ... Drlg. 390 ft.

NOLAN COUNTY

L. G. Bradstreet et al's No. 1 Kuteman, C NW Sec. 95, Blk. X, T.&P. Sur. ... Drlg. 355 ft.
Phillips Pet. Co.'s No. 1 Plunkett, 330 ft. N and W of SE cor. NW Sec. 66, Blk. 23, T.&P. Sur. ... Drlg 235 ft.

PECOS COUNTY

Alexander & Lyle's No. 1 Myrtle Sellman, C SW SE Sec. 20, Blk. Z, T.S.Ry Sur. ... Top salt 814 ft.; top lime 1,601 ft.; 3,400,000 ft. gas from 1,611-26 ft.; spraying very little oil; sulphur water 1,652 ft.; shut down 1,655 ft.
Atlantic O. P. Co.'s No. 1 Trees, 330 ft. from N and 990 ft. from W line Sec. 108, Blk. 8, H.&G.N.R.R. Sur. ... Drlg. 1,005 ft.
M. H. Black's No. 1 P.V.O. Co., 2,310 ft. from SE and 1,650 ft. from SW lines Sec. 22, Blk. 10, H.&G.N. Sur. ... Top salt 1,090 ft.; total depth 1,647 ft. TP 1,618 ft.; made one 5-bbl. head oil.
E. R. Bell et al's No. 1 Gray, 150 ft. from S and 2,490 ft. from W line Sec. 593, G.C.&S.F.R.R. Sur. ... Drlg. 1,247 ft.
Buell & Hagan's No. 1 University-B, 330 ft. N and 2,310 ft. W of SE cor. Sec. 36, Blk. 18, University Land ... Shut down 600 ft.
Cowboy Evans' No. 1 Pecos Valley, 2,310 ft. from NW line, 990 ft. from SW line of Sec. 36, Blk. 3, H.&T.C. R.R. Sur. ... Rig.
Cromwell & Kimberlin's No. 1 Jackson, 2,490 ft. from NW line, 1,170 ft. from NE line Sec. 28, Blk. 3, H.&T.C.R.R. ... Location.
Crowley's No. 1 Heiner, 2,400 ft. each way from N and E lines Sec. 589, G.C.&S.F.R.R. Sur. ... Shut down 1,170 ft.
California Co.'s No. 2 Smith, Lease 5, Sec. 16, 1,550 ft. from W and 200 ft. from N line Blk. 194, G.C.&S.F. R.R. Sur. ... Total depth 1,597 ft.; bailed 15 bbls. oil in 24 hours; 43,000 ft. gas.
Clayton Williams' No. 1 Sanford, 160 ft. from NW line 1,150 ft. from SW line Sec. 55, Blk. 10, H.&G.N. ... Moving in machinery.
Ditto Oil Co.'s No. 1 J. M. Montgomery, Sec. 104, Blk. 331, A-16,337 ... Shut down 1,505 ft.
Imperial Oil & Gas Co.'s No. 1 Pecos Valley Oil Co., 990 ft. from SE line and 1,650 ft. from SW line Sec. 22, Blk. 10, H.&G.N.R.R. Sur. ... Location.
Sam Kitts and others' No. 1 Sherbino, 330 ft. from N and 990 ft. from W line Sec. 52, Blk. C-4, G.C.&S.F. R.R. ... Fishing 250 ft.
Mariand Oil Co.'s No. 1 University, Sec. 10, Blk. 17, 1,620 ft. from N, 1,020 ft. from E ... Location.
Matador Oil Co.'s No. 3 Smith, 2,310 ft. from N and 990 ft. from E lines, Sec. 24, Blk. 194, G.C.&S.F.R.R. Sur. ... Moving in machine.
Mauch & Kroger's No. 1 Holmes, Sec. 5, Blk. 178, T.C. Sur. ... Shut down 1,442 ft.
McMan Oil & Gas Co.'s No. 6 Smith, C Sec. 25, Blk. 194, 2,127 ft. from N and 1,740 ft. from W ... Location.
Moncrief et al's No. 1 Tippett, 1,980 ft. from S and 660 ft. from W lines of Sec. 46, Blk. 194, G.C.&S.F. Sur. ... Rigging up.
R. E. Moore's No. 1 Arnold, 1,320 ft. from S and 660 ft. from E lines of Sec. 18, Blk. 1, H.&T.C.R.R. ... Shut down 225 ft.
Perrin et al's No. 1 Eaton, 150 ft. each way from NE and NW lines Sec. 27, Blk. 3, H.&T.C. Sur. ... 18,000,000 ft. gas 1,490-1,502 ft.; spraying salt water from behind 8¼-in. casing set at 1,180 ft.; SD 1,502 ft.; 5 3-16 inch casing set on bottom with last joint perforated.
Plymouth Oil Co.'s No. 2 Perry, Sec. 29, Blk. 178, 330 ft. from N and E cor. ... Drlg. 570 ft.
Phillips Pet. Co.'s No. 1 Pryor, 440 ft. S and E of NW cor. Sec. 78, Blk. OW, T.M.R.R. Sur. ... Drlg. 848 ft.
Phillips Pet. Co.'s No. 2 Ramsey, 990 ft. S and 1,980 ft. W of NE cor. Sec. 17, Blk. 194, G.C.&S.F. Sur. ... Drlg. 675 ft.
T. G. Shaw's No. 1 Yates, Sec. 58, Blk. 1, I.&G.N.R.R. Sur. ... Location.
B. J. Spikes' No. 1 George Brown ... Shut down 1,210 ft.; show oil 1,180-90 ft.
Schumaker et al's No. 1 Williams et al, 330 ft. N of middle of S line Sec. 1, Blk. 117, G.C.&S.F. ... Drlg. 1200 ft.
Southern Crude O. P. Co.'s No. 1 Jackson T-139, Sec. 28, Blk. 3, 1,487 ft. from NE, 2,518 ft. from SE cor. ... Location.
Talbot and others' No. 1 Unsicker, 150 ft. each way from NE and SE cor. line of Sec. 25, Blk. 10, H.&G.N. Sur. ... Location.
Taylor Link Oil Co.'s No. 1 University, 330 ft. from S and E Sec. 30, Blk. 16, University ... Location.
Tidal Oil Co.'s No. 1 University, 1,320 ft. from S and W lines of Sec. 16, Blk. 20, University Land ... Drlg. 135 ft.
Transcontinental Oil Co.'s No. 1 Sellman, 990 ft. N and W of SE cor. Sec. 7, Blk. 194, G.C.&S.F.R.R. Sur. ... U R 905 ft.
Transcontinental Oil Co.'s No. 1 University, NE NW SW Sec. 18, Blk. 18 ... Top lime 1,155 ft.; S D 4,407 ft.
Transcontinental Oil Co.'s No. 2 University, C of SW SW Sec. 9, Blk. 17, University Land ... Drlg. 840 ft.
Weekley Oil Corp.'s No. 1 Byrne, 990 ft. each way from NW and SW lines of Sec. 24, Blk. 10, H.&G.N.R.R. Sur. ... Shut down 1,600 ft.

PRESIDIO COUNTY

Phillips Pet. Co., Empire G. & F. Co., Delmar Oil Co. and C. E. Miller's No. 1 Tootle Est., C NE Sec. 75, Blk. 3, D.&P.R.R. Sur. ... Set 8-in.; total depth 2,470 ft.; cleaning out.
L. C. Brite's No. 3 Brite, 2,500 ft. N and 2,300 ft. W of SE cor. Sec. 51, Blk. 12, G.H.&S.A. ... Drlg. 900 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 1-C University, 2,598 ft. S and 250 ft. W of NE cor. Sec. 1, Blk. 2, University Land ... Drlg. 2,475 ft.
Kemrow Co.'s No. 1 Sawyer Cattle Co., 1,320 ft. from N and 1,980 ft. from E line Sec. 8, J. G. Robinson Sur. ... Location.
Skelly Oil Co.'s No. 4 University, 2,310 ft. N and 990 ft. W of SE cor. Sec. 33, Blk. 8 ... Top salt 1,270 ft.; drlg. 2,020 ft.

REEVES COUNTY

Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W of NE cor. Sec. 26, Blk. C-18, Public School Land, elev. 2,847 ft. ... Total depth 2,900 ft.; shut down.
Earl Henby's No. 1 Brooks, 1,980 ft. N and 660 ft. W Sec. 16, Blk. 59 ... Spudded and shut down.
Southern Crude O. P. Co.'s No. 1 Kloh-Rumsey, 2,310 ft. N and W SE cor. Sec. 23, Blk. 61 ... Hole full water 1,140 ft.; drlg. 1,360 ft.

David R. Thompson's No. 1 A. A. Eddins ..... Fishing casing 5,658 ft.; underreaming 8¼-in. casing.

Robert Penn et al's No. 1 Bowles, 2,310 ft. SW of NE cor. Sec. 36, Blk. 50, Twp. 8, T.&P.R.R. Sur. ..... Top salt 1,725 ft.; hole full fluid 5,176 ft.; drlg. 5,378 ft; sandy shale.

Lee O. White et al's No. 1 Kloh-Rumsey, 660 ft. S and E of NW cor. Sec. 5, Blk. 51, Twp. 10, T.&P. Sur. ... Shut down 980 ft.

RUNNELS COUNTY

Boyce et al's No. 1 E. O. Lange, 2,300 ft. S and 6,900 ft. W of NE cor. Austin & Williams Sur. No. 262 ..... Shut down 1,350 ft.

Foster et al's No. 1 Currie, 1,866 ft. SE of NW line, 335 ft. SW of NE line Gray Carroll Sur. ..... Cleaning out 620 ft.

Independent Oil & Gas Co.'s No. 1 Will Rollwitz, 330 ft. S and W of NE cor. S half M. Salinas Sur. No. 20½ .. Drlg. 1,955 ft.

Mariand Prod. Co.'s No. 1 August Herring, 330 ft. S and 1,650 ft. W of NE cor. Sec. 39, E.T.R.R. Co. Sur... Underreaming 3,450 ft.

McLean et al's No. 1 G. W. Clayton, 150 ft. N line, 270 ft. from W line Sec. 135, E.T.R.R. ..... Shut down 1,185 ft.

Nourse & Tilton's No. 1 R. A. Stokes, 200 ft. S, 600 ft. E of NW cor. G.C.&S.F. Sur. No. 2 ..... Shut down 3,810 ft.

Pure Oil Co.'s No. 3 Giesecke, 11,656 ft. S and 1,269 ft. E of NW cor. Hughes ..... Drlg. 1,200 ft.

Pure Oil Co.'s No. 1 Russell, 367 ft. E and 12,231 ft. S of NW cor. Hughes Sur. No. 227 ..... Location.

Pure Oil Co.'s No. 2 Russell, 945 ft. E and 12,015 ft. S of NW cor. Sur. No. 227 ..... Location.

Vacuum Oil Co.'s No. 4 McMillan, 555 ft. S and 717 ft. W of NE cor. Lot 22, Domingo Diaz Sur. No. 532 ..... Location.

SCURRY COUNTY

I. B. Mims et al's No. 1 J. J. Koonsman, Sec. 216, Blk. 2, H.&T.C. Sur. ..... Spudded and shut down 300 ft.

G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... Shut down 2,710 ft.

STERLING COUNTY

F. & G. Oil Co.'s No. 1 W. L. Foster, C SE Sec. 20, Blk. 12, S.P.R.R. Sur. ..... Show oil 1,296-98 ft. and 1,356-58 ft.; fishing 2,182 ft.; shut down 2,440 ft.

George L. Miller's No. 1 Foster, 3,690 ft. S and 1,397 ft. W of NE cor. Sec. 4, Blk. 31, T.&P. Sur. ..... Set 12½-in. casing 830 ft.; set 8-in. casing 2,138 ft.; S D 2,982 ft.

SUTTON COUNTY

Phillips Pet. Co.'s No. 1 A. G. Holman, 2,310 ft. S and 330 ft. W NE cor. Sec. 35, G.C.S.D.&N.G.R.R. Sur. ... Show gas 6,430 ft.; shut down 6,500 ft.

L. G. Priest's No. 1 Allison, 1,320 ft. N and E of SW cor. Sec. 52, Blk. A, T.&P. Sur. ..... Set 15-in. casing 530 ft.; drlg. 2,230 ft.

Southern C. O. P. Co.'s No. 1 Allison, 2,310 ft. S and 320 ft. W of NE Sec. 41, Blk. K, G.H.&S.A. Sur. ..... Fishing 4,445 ft.

TAYLOR COUNTY

V. B. Jameson's No. 1 Webb, 1,170 ft. S and W of NE cor. Sec. 46, Lunatic Asylum Land ..... Drlg. 2,340 ft.

Mid-Continent Oil & Gas Co.'s No. 1 Taylor, 990 ft. W 215 ft. N SE cor. 100-ac. tract, Sec. 18, Guadalupe School Land Sur. ..... 300 ft. oil 2,384-87 ft.; 2,445-50 ft.; swabbed 5 bbls.; shut down 3,006 ft.; ran bailer 25 ft. off bottom; no oil; total depth 3,087 ft.; plugged back to 2,468 ft.; shot 30 qts. 2,443-60 ft.; 1,100 ft. fluid in hole; cleaning out.

Root Drlg. Co.'s No. 1 Martin, 990 ft. E and 1,650 ft. N of SW cor. Sec. 30, Blk. 19, T.&P.R.R. Sur. ..... Drlg. 1,405 ft.

Wentz Oil Corp.'s No. 1 Armour, 275 ft. N and 330 ft. W of SE cor. W half Sec. 16, Blk. 6, S.P.R.R. Sur. .. Shut down 2,250 ft.

TERRELL COUNTY

Big-Bend Oil Co.'s No. 1 Barrett, C NW Sec. 155, Blk. D, M.-K.-T.R.R. Sur. ..... Spudded and shut down.

Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Blk. D-7, E.L.R.R. Sur. ..... Drlg. 2,155 ft.

Mrs. J. B. McPhee's No. 1 Sam Bell, C Sec. 78, Blk. D-7, E.L.&R.R. Sur. ..... Drlg. 410 ft.

Milham Exploration Co.'s No. 1 Bassett, Sec. 76, Blk. Y, W. E. Robertson Sur. ..... Cem. 6⅝-in. casing 3,986 ft.; drlg. 4,800 ft.

Woodley & Jones' No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&N.G.R.R. Sur. ..... Drlg. 600 ft.

TERRY COUNTY

Kingsland O. P. Co.'s No. 1 Brownfield, C NW SW SW Sec. 7, Blk. 1-A, E.L.R.R. Sur. ..... Fishing bailer 5,080 ft.

TOM GREEN COUNTY

Fitzgerald & Taliaferro's No. 1 Bennett, C SW Sec. 1,628, E. H. Ringer. ..... Shut down 1,920 ft.

Williams et al's No. 1 Willeke, 2,500 ft. N and 75 ft. E of SW cor. Sec. 3, Deaf & Dumb Asiyum Land ..... Total depth 750 ft.; hole full sulphur water 750 ft.

UPTON COUNTY

Humble O. & R. Co.'s No. 11 Ricker, 1,320 ft. from NE cor. and 5,390 ft. from NW line Sec. 5, Denton Sur. A-127 ..... Drlg. 2,020 ft.

Wentz Oil Co.'s No. 5 Shirk, 2,310 ft. N and 1,650 ft. W of SE cor. Sec. 35, Blk. 1, M.-K.-T.R.R. Sur. ..... Top salt 815 ft.; shut down 2,181 ft.

YOAKUM COUNTY

Weekley Oil Corp.'s No. 1 Knight, C NW Sec. 791, Blk. D, John Gibson Sur. ..... Fishing 1,015 ft.

VAL VERDE COUNTY

Independent Operators' No. 1 Whitehead, SE SE Sec. 30, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... Shut down 4,850 ft.

O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... Gas sand 2,491-2,520 ft.; tested 125,750 ft. gas; reset 8-in. 2,511 ft.; shut down 4,210 ft.

Producers Oil Co. et al's No. 1 Everett Bros., 2,310 ft. S and 330 ft. E of NW cor. Sec. 40, Blk. DB, C.C.S.D.&R.G.N.G. Sur. ..... Shut down 2,450 ft.

Dyar Bros. et al's No. 1 Wilson, 6,830 ft. N NE cor. Sec. 1, T.&P. Sur., thence 1,680 ft. E Sec. 115, Blk. E, G.C.&S.F. Sur. ..... Total depth 2,820 ft.; pulling casing to straighten crooked hole.

Talvert Oil Corp.'s No. 1 Bassett, C NE Sur. 47, Blk. Y .. Set 15½-in. casing 767 ft.; set 10-in. casing 1,510 ft.; shut down 3,760 ft.

WARD COUNTY

Atlantic & Delmar Co.'s No. 2 Hayzlett, 150 ft. each way from W cor. E Sec. 17, Blk. 5, H.&T.C. ..... Spudding 105 ft.

Gulf Prod. Co.'s No. 2 Hutchins, 330 ft. N and E Sec. 7, Blk. O ..... Drlg. 410 ft.

Barstow Oil & Gas Co.'s No. 1 Gillespie, Sec. 50, Blk. 33.. Spudded and shut down.

Gulf Prod. Co.'s No. 5 O'Brien, 330 ft. each way NW of SW Sec. 18, Blk. F, G.M.M.B.&A. Sur. ..... Drlg. 460 ft.

Gulf Prod. Co.'s No. 1 Wristen, 216 ft. NW, 1,107 ft. SE Sec. 18, Blk. 5 ..... Location.

J. H. L. Oil Co.'s No. 2 Hayzlett, 1,100 ft. from SW and 220 ft. from SE line Sec. 17, Blk. 5, H.&T.C. ..... Total depth 2,431 ft.; estimated 140 bbls. daily; T P 2,430 ft.

Kemper-Kimberlin's No. 1 Thompson, 1,470 ft. NE, 150 ft. NW Sec. 15, Blk. 5 ..... Location.

L. B. Lovelace et al's No. 1 Redman, 1,980 ft. NE of SW line and 1,980 ft. SE of NW line, Sec. 162, Blk. 24, H.&T.C.R.R. ..... Shut down 960 ft.

Shipley et al's No. 1 Monroe, 330 ft. SE SW Sec. 3, Blk. 1 ..... Location.

WINKLER COUNTY

American Maracaibo Co.'s No. 2 Hendricks-B, 1,980 ft. N and 1,650 ft. E of SW cor. Sec. 28, Blk. B-5 ..... Cem. 12½-in. casing 170 ft.; top lime 2,599 ft.; drlg. 2,730 ft.; 2,000,000 ft. gas 2,725-28 ft.

M. J. Bashara's No. 1 fee, 990 ft. N and 2,310 ft. E SW cor. Sec. 17, Blk. B-3 ..... Top lime 2,300 ft.; cem. 8¼-in. casing 2,477 ft.; rig burned T. D. [illegible] ft.; 19,430,000 ft. gas; top gas 2,481 ft.

Barnsdall Oil Corp.'s No. 3 Tobe Morton, 990 ft. N and 330 ft. E of SW cor. Sec. 26, Blk. B-12 ..... Cellar.

Empire Gas & Fuel Co.'s No. 1-B Daugherty, 2,310 ft. S and 990 ft. W of NE cor. Sec. 3, Blk. 74 ..... Top lime 2,822 ft.; oil and gas show at 3,165 ft.; drlg. 3,378 ft.; flowing 15,000 bbls. daily; cem. 6⅝-in. casing 3,382 ft.; drlg. 3,668 ft.

Gulf Prod. Co.'s No. 1 Daugherty, 330 ft. S and W of NW and W of Sec. 22, Blk. 26 ..... Drlg. 1,200 ft.

Gulf Prod. Co.'s No. 1 Clapp, 330 ft. S and W Sec. 37, Blk. 26 ..... Location.

Humble O. & R. Co.'s No. 11 Hendricks-C, Lease No. 2, 1,980 ft. S and 1,325 ft. E of NW cor. Sec. 10, Blk. B-12, Public School Land ..... Drlg. 2,740 ft.

Humble O. & R. Co.'s No. 12 Hendricks-C, 1,980 ft. N and 1,325 ft. E of SW cor. Sec. 10, Blk. B-12 ..... Rig.

Humble O. & R. Co.'s No. 1 Walton-A, 2,310 ft. N and 330 ft. E SW cor. Sec. 48, Blk. 26 ..... Drlg. 765 ft.

Humble O. & R. Co.'s No. 12 Hendricks-C, 1,980 ft. S and 1,325 ft. W Sec. 10, Blk. B-12 ..... Rig.

Kermit Dev. Co.'s No. 1 Carter, 640 ft. S, 2,227 ft. W Sec. 27, Blk. B-3 ..... Shut down 400 ft.

Magnolia Pet. Co.'s No. 2 Scarborough, 1,620 ft. N and 990 ft. W SE cor. Sec. 1, Blk. C-22 ..... Spudded.

Prairie O. & G. Co.'s No. 2 Daugherty, 330 ft. S and 990 ft. E of NW cor. Sec. 16, Blk. 74 ..... Top lime 2,756 ft.; cem. 8¼-in. casing at 2,759 ft.; top pay 2,977 ft.; 1,300 ft. oil in hole; bailing at 3,189 ft.; 1,200 ft. fluid in hole.

Prairie O. & G. Co.'s No. 1 Scarborough, 990 ft. N and 1,650 ft. W of SE cor. Sec. 1, Blk. C-22 ..... Cem. 12½-in. casing 260 ft.; top salt 1,400 ft.; set 8¼-in. casing 2,845 ft.; shut down 3,129 ft.; top pay 2,930 ft.; increase in oil and gas at 3,010 ft.; flowing 150 bbls. daily; cleaning out.

Shell Pet. Co.'s No. 1 Leck, 990 ft. S and 1,650 ft. E of NW cor. Sec. 3, Blk. 74 ..... Top lime 2,789 ft.; total depth 3,139 ft.; show oil and gas at 3,041 ft.

Shell Pet. Co.'s No. 6 Scarborough, 330 ft. N and W of SE cor. NW SE Sec. 1, Blk. C-22 ..... Rigging up.

Skelly Oil Co.'s No. 2 Hendricks-C, 1,320 ft. N and 2,310 ft. W of SE cor. Sec. 10, Blk. B-12 ..... Top lime 2,636 ft.; show oil 3,034 ft.; hole full sulphur water 3,030-39 ft.; total depth 3,055 ft.; flowing 1,000 bbls. fluid 99 per cent water.

Skelly Oil Co.'s No. 2 Leck, 2,310 ft. N and 330 ft. E SW cor. Sec. 22, Blk. 26 ..... Rig.

Southern Crude O. P. Co.'s No. 6 Hendricks T-67-3-A, 990 ft. S and 1,650 ft. W of NE cor. Sec. 4, Blk. B-12 ..... Cem. 12½-in. casing 2,245 ft.; cem. 8¼-in. casing 2,664 ft.; top lime 2,612 ft.; top pay 2,790 ft.; total depth 3,023 ft.; flowed 5,000 bbls. water and 100 bbls. oil per day before plugging back at 3,020 ft.

Southern Crude O. P. Co.'s No. 5 Hendricks T-67-F, 330 ft. N and 990 ft. W of SE cor. Sec. 33, Blk. B-5, School Land ..... Top lime 2,711 ft.; cem. 8¼-in. casing 2,784 ft.; top lime 2,711 ft.; top pay 2,745 ft.; flowing 75 bbls. per day, 30 per cent water; total depth 3,009 ft.; preparing to pump hole full fluid.

Simms Pet. Co. et al's No. 2 Sealey, 2,434 ft. S and 990 ft. W of NE cor. Sec. 50, G.M.M.&A. Sur. ..... Rotary rig.

Southern Crude O. P. Co.'s No. 8 Hendricks T-88-C, 2,310 ft. S and 1,650 ft. E of NW cor. Sec. 28, Blk. B-5, School Land ..... Top lime 2,515 ft.; cem. 8¼-in. casing 2,535 ft.; T. D. 2,950 ft.; rig burned; T P 2,685 ft.; 2,500 ft. fluid in hole.

Southern Crude O. P. Co.'s No. 2 Hendricks T-88-CX, Sec. 21, Blk. 26 ..... Drlg. 430 ft.

Southern Crude O. P. Co.'s No. 3 Hendricks T-88-CX, 2,310 ft. N and 330 ft. W of SE cor. Sec. 21, Blk. 26.. Rigging up rotary.

Southern Crude O. P. Co.'s No. 6 Hendricks T-88-K, 2,200 ft. S, 1,650 ft. W of NE cor. Sec. 41, Blk. 26 ... Cem. 8¼-in. casing 2,662 ft.; rigging up standard tools; drlg. 2,865 ft; flowing 100 bbls. daily; T P 2,695 ft.

Southern Crude O. P. Co.'s No. 7 Hendricks T-88-K, 1,320 ft. S and 1,650 ft. W of NE cor. Sec. 41, Blk. 26 ..... Drlg. 1,670 ft.

Southern Crude O. P. Co.'s No. 32 Hendricks T-88-M, 1,760 ft. S and 990 ft. W of NE cor. Sec. 33, Blk. 26, School Land ..... Cem. 8¼-in. casing 2,354 ft.; rigging up standard tools.

Southern Crude O. P. Co.'s No. 6 Hendricks T-88-N, 1,320 ft. N and W of SE cor. Sec. 28, Blk. 26, School Land ..... Cem. 8¼-in. casing 2,436 ft.; rigging up standard tools.

Southern Crude O. P. Co.'s No. 7 Hendricks T-88-N, 2,320 ft. N and 2,640 ft. W of SE cor. Sec. 28, Blk. 26.. Cem. 8¼-in. casing 2,559 ft.; rigging up standard tools.

Southern Crude O. P. Co.'s No. 3 Hendricks T-88-O, 440 ft. S, 330 ft. W of NE cor. Sec. 28, Blk. 26 ..... Top lime 2,376 ft.; drlg. 2,743 ft.; 140 bbls. hourly, 77 per cent water; top pay 2,690 ft.

Southern Crude O. P. Co.'s No. 4 Hendricks T-88-O, 1,320 ft. S and W of NE cor. Sec. 28, Blk. 26 ..... Drlg. 2,405 ft.

Southern Crude O. P. Co.'s No. 2 Hendricks T-88-P, Sec. 28, Blk. 26 ..... Material on ground.

Southern Crude O. P. Co.'s No. 3 Hendricks T-88-R, 1,320 ft. N and E of SW Sec. 27, Blk. 26 ..... Total depth 2,365 ft.; coring 2,639 ft.

Southern Crude O. P. Co.'s No. 8 Hendricks T-88-U, 1,320 ft. S and 1,650 ft. E Sec. 41, Blk. 26 ..... Cem. 8¼-in. casing 2,672 ft.

Southern Crude O. P. Co.'s No. 6 Hendricks T-89-J, 2,200 ft. S and 330 ft. W of NE cor. Sec. 9, Blk. B-12 Top lime 2,510 ft.; cem. 8¼-in. 2,525 ft.; rigging up standard tools; cem. 8¼-in. casing 2,531 ft.; drlg. 2,805 ft.

Southern Crude O. P. Co.'s No. 7 Hendricks T-89-J, 1,540 ft. from N and 1,320 ft. from E lines Sec. 9, Blk. B-12 ..... Cem. 12½-in. casing 371 ft.; rigging up standard tools 2,582 ft.; cem. 6-in. casing 2,582 ft.

Southern Crude O. P. Co.'s No. 8 Hendricks T-89-J, 440 ft. N and 330 ft. W of SE cor. Sec. 9, Blk. B-12 ..... Drlg. 2,487 ft.

Texas Canadian Oil Co.'s No. 1 Kloh-Rumsey, 1,320 ft. N and E of SW cor. Sec. 35, Blk. 46, T.&P.R.R. Sur. .. Shut down 4,011 ft.

Tidal Oil Co.'s No. 1 Scarborough, 330 ft. S and E of NW SE SE Sec. 1, Blk. C-22 ..... Rig.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 39)

Sun Oil Co.'s No. 1 T. B. Yarborough, 485 ft. S and 2,460 ft. E NW cor. Sec. 551, Blk. H, W.&N.W. Sur.—C.O. 3,825 ft.

DONLEY COUNTY

Beaudoin et als' No. 1 Ball, 1,075 ft. from N line and 985 ft. from E line, Sec. 22, Blk. E, D.&P.R.R. Sur.—Rig.

Marine Oil Co.'s No. 1 Sawyer, C SW, Sec. 5, Blk. G, G.C.&S.F. Sur.—Drlg. 1,180 ft.

GRAY COUNTY

Anderson et als' No. 1 Heithoit, C NE SW, Sec. 152, Blk. 3, I.&G.N. Sur.—Drlg. 2,528 ft.

Amagray Oil Co.'s No. 2 Chapman, 330 ft. S and W of NE cor. W½ SW, Sec. 9, Blk. 26, H.&G.N. Sur.—Drlg. 1,500 ft.

B. S. Arnold's No. 1 J. E. Mingale, C E 160 ac., Sec. 212, Blk. B-2, H.&G.N. Sur.—S.D. 2,310 ft.

Barnsdall Oil Corp.'s No. 1 M. B. Davis, NW cor. W½ Sec. 9, Blk. 1, A.C.H.&B. Sur.—S.O. 2,820 ft; show gas 2,836 ft; S.O. 2,980 ft; T.D. 3,010 ft; plugged back to 2,883 ft. to shoot.

British American Oil Co.'s No. 1 Purviance, 330 ft. each way from NW E 160 ac., Sec. 61, Blk. B-2, H.&G.N.—Location.

Camel Oil Co.'s No. 1 Harrah-B, 330 ft. each way from NW cor. NE, Sec. 150, Blk. 3, I.&G.N. Sur.—Drlg. 2,825 ft.

Champlin Ref. Co.'s No. 1 McLaughlin, 330 ft. S and W of NE cor. Sec. 33, Blk. B-2, H.&G.N. Sur.—Fish. 2,583 ft.

Crabtree Drlg. Co.'s No. 1 B. F. Talley, SW NE, Sec. 114, Blk. M-2, B.S.&F. Sur.—S.D. 2,740 ft.

Cockrell McElroy et als' No. 1 McConnell, 330 ft. each way from NE cor. W½ SW, Sec. 174, Blk. 3, I.&G.N.R.R. Sur.—Show gas 2,890 and 2,920 ft; drlg. 3,197 ft; light spray 3,140-45 ft.

Cockrell McElroy Oil Co.'s No. 2 McConnell, 330 ft. S and E of NW cor. W½ SW, Sec. 174, Blk. 3, I.&G.N.R.R. Sur.—Spudding.

Constantine et als' No. 1 Dial, 330 ft. S and E of NW cor. W½ NW, Sec. 32, Blk. 25, H.&G.N. Sur.—S.D. 2,965 ft.; encountered salt water.

Danciger O. & R. Co.'s No. 1 H. K. Beck, 330 ft. S and E of NW cor NW, Sec. 28, Blk. B-2, H.&G.N. Sur.—Drlg. 1,780 ft.

Danciger O. & R. Co.'s No. 4 Morse, 330 ft. S and E of NW cor. NW SW, Sec. 1, Blk. 26, H.&G.N. Sur.—Rig.

Danciger et als' No. 1 Sheridan, SE cor. Sec. 184, Blk. B-2, H.&G.N.R.R. Sur.—Temp. abd.

Delaney and Associates Oil Co.'s No. 8 Jackson, 990 ft. S and 330 ft. E NW cor. E½ SW, Sec. 88, Blk. B-2, H.&G.N.R.R. Sur.—Cellar.

Dye & Gillette's No. 1 J. L. Noel, 330 ft. each way from SE cor. E½ NE, Sec. 187, Blk. 3, I.&G.N.R.R. Sur.—Show gas 2,845 ft; T.D. 3,209 ft; swbd. 60 bbls. in 24 hrs; first oil 3,160-61 ft.

Empire G. & F. Co.'s No. 1 R. M. Brown, C of SE, Sec. 238, Blk. B-2, H.&G.N. Sur.—Fish. 300 ft.

Sines & Reiger's, formerly Eslick et als,' No. 1 Mrs. J. A. Hopkins, NW cor. W 80 ac. of SW, Sec. 84, Blk. B-2, H.&T.C. Sur.—Fish. pipe 3,206 ft.

Gardner Bros. and Collins' No. 1 Lincoln-Saunder, 330 ft. S and W of NE cor. W½ NE, Sec. 3, Blk. 1, A.C.H.&B. Sur.—Drlg. 1,975 ft.

Gardner Bros. & Collins' No. 2 Saunders, 350 ft. from N on center line of W 68 of W½ of E½ of J. G. Eustis Sur.—Location.

Gulf Prod. Co.'s No. 7-B Bowers, 990 ft. N and 330 ft. W of SE of 160-ac. lease, Sec. 89, Blk. B-2, H.&G.N. Sur.—Drlg. 2,104 ft.

Gulf Prod. Co.'s No. 1 Jackson, 295 ft. N and 305 ft. E of SW cor. W½, Sec. 62, Blk. B-2, H.&G.N.R.R. Sur.—Drlg. 2,140 ft.

Harrell's No. 1 McConnell, 330 ft. S and W of NE cor. E½ SE, Sec. 187, Blk. 3, I.&G.N.R.R. Sur.—S.D. 2,280 ft.

Independent O. & G. Co.'s No. 1 Hottenbeck, 990 ft. each way from NE cor. NE, Sec. 176, Blk. 3, I.&G.N.R.R. Sur.—Drlg. 2,375 ft.

Magnolia Pet. Co.'s No. 4 J. B. Bower, 330 ft. S and 270 ft E of NW cor. Sec. 63, Blk. B-2, H.&G.N. R.R. Sur.—Drlg. 2,400 ft.

Marland Prod. Co.'s No. 2 Brown, 330 ft. N and W of SE cor. Sec. 32, Blk. B-2, H.&G.N.R.R. Sur.—Drlg. 2,640 ft; show gas 2,475-85 ft. and 5,000,000 ft. gas 2,560-2,620 ft.

McConnell Oil Co.'s No. 1 McConnell, 330 ft. from N and E lines W½ NE, Sec. 65, Blk. 4, I.&G.N. Sur.—Location.

McLain Oil Co.'s No 1 Back, 1,000 ft. from W line and 330 ft. from N line, NW, Sec. 24, Blk. 25, H. &G.N. Sur.—S.D. 2,340 ft; 1,000,000 ft. gas 2,105-10 ft. and estimated 3,000,000 ft. gas 2,202-08 ft.

McMan O. & G. Co.'s No. 1 Saunder, 330 ft. N and E of SW cor. E 80 ac. W½ of E½, J. G. Eustice Sur.—Drlg. 2,400 ft.

Nabob Oil Co.'s No. 2 Morse, 660 ft. from W line and 330 ft. from S line SW, Sec. 67, Blk. 25, H.&G. N.R.R. Sur.—Cellar; temp. abd.

Operators Oil Co.'s No. 7 Jackson, 330 ft. S and 270 ft. W of NE cor N½ NE, Sec. 88, Blk. B-2, H.&G.N.—Show gas 2,256 ft; drlg. 2,702 ft.

Phillips Pet. Corp.'s No. 1 Jackson, 330 ft. each way from NE cor. NE, Sec. 58, Blk. B-2, H.&G.N.R.R. Sur.—Cellar.

Phillips Pet. Corp's No. 5 Jackson, 330 ft. S and 990 ft. E of NW cor. S½ NE, Sec. 88, Blk. B-2, H.&G.N.—S.D. 238 ft; rebuilding rig.

Phillips Pet. Co.'s No. 1 Palmer, 330 ft. N and W of SE co. Sec. 31, Blk. B-2, H.&G.N.R.R. Sur.—25,000,000 ft. gas 2,761-67 ft; T.D. 2,806 ft; flowed 50 bbls. oil firs. hr. and 10 bbls. per hr. first 24 hrs. with 40,000,000 ft. gas.

Panhandle Ref. Co.'s No. 1 Saunder, 330 ft. S and E of NW cor. E½ NE, Sec. 3, Blk. 1, A.C.H.&B. Sur.—Drlg. 2,345 ft; 15,000,000 ft. gas 2,150-2,320 ft.

Panhandle Ref. Co.'s No. 2 Saunders, 330 ft. S and W of NE cor. E½ NE, Sec. 3, Blk. 1, A.C.H.&B. Sur.—Drlg. 1,930 ft.

Scott Drlg. Co. et als' No. 1 Chapman, 330 ft. N and E of SW cor. S½ of NE, Sec. 69, Blk. 25, H.&G. N. Sur.—Rigging up.

Ray Massie's No. 4 Chapman, 330 ft. each way from NW SE SW, Sec. 51, Blk. 25, I.&G.N. Sur.—Location.

Shamrock Co.'s No. 3 Clayton, 150 ft. from W and 330 ft. from N line, E 277.4 ac., Sec. 50, Blk. 25, H.&G. N.R.R. Sur.—Rigging up.

Shamrock Pet. Co.'s No. 2 Chapman-A, 990 ft. E and 330 ft. from S lines S½ SW, Sec. 70, Blk. 25, H. &G.N.R.R. Sur.—T.D. 2,916 ft; to abd.

Shamrock Co.'s No. 1 Clayton-B, 730 ft. from N and 150 ft. from W line E½ of E 277.4 ac., Sec. 50, Blk. 25—Building rig.

St. Clair Oil Co.'s No. 1 Dial, 330 ft. S and W of NE cor. SE, Sec. 10 Blk. 25, H.&G.N.R.R. Sur.—Cellar.

St. Clair Oil Co.'s No. 1 Rowe, Sec. 32, Blk. R—S.D. 3,490 ft. with H.F.W.

St. Clair Oil Co.'s No. 1 L. S. Stockton, SE cor. Sec. 35, W. R. Lee Sur.—Spudded and S. D.

Sun Oil Co.'s No. 1 Purviance, 330 ft. S and W of NE W 80 ac., Sec. 61, Blk. B-2, H.&G.N.R.R. Sur.—Drlg. 2,450 ft.

The Texas Co.'s No. 5 J. B. Bowers, 330 ft. N and 990 ft. E of SW cor. of E½, Sec. 89, Blk. B-2, H.&G. N.R.R. Sur.—T.D. 2,900 ft; swbd. 875 bbls. oil in 24 hrs. 2,895-2,900 ft; 1,500 000 ft. gas; to deepen.

The Texas Co.'s No. 6 Bowers, 270 ft. W and 330 ft. N of SE cor. E½, Sec. 89, Blk. B-2, H.&G.N.R.R. Sur.—Drlg. 2,175 ft.

The Texas Co.'s No. 7 Bowers, 330 ft. E and 990 ft. N of SW cor. E½, Sec. 89, Blk. B-2, H.&G.N. Sur.—Drlg. 2,420 ft.

The Texas Co.'s No. 2 B. Bull, 990 ft. S and E of NW, Sec. 2, Blk. B-2, H.&G.N.R.R. Sur.—Drlg. 1,210 ft.

The Texas Co.'s No. 2 Chapman-B, 990 ft. N and E of SW cor. Sec. 50, Blk. A-9, H.&G.N.R.R. Sur.—Drlg. 1,360 ft.

The Texas Co.'s No 6 Chapman-A, 330 ft N and 755 ft. E of SW cor. SE, Sec. 51, Blk. 25, H.&G.N. Sur.—Cmtng. 8-in. csg. 2,142 ft.

The Texas Co.'s No. 1 Faulkner, 330 ft. each way from NW cor. Sec. 29, Blk. B-2, H.&G.N. Sur.—Drlg. 2,760 ft; show oil and 4,000,000 ft. gas 2,480-2,610 ft.

The Texas Co.'s No. 2 Faulkner, 330 ft. each way from SW cor. Sec. 29, Blk. B-2, H.&G.N.R.R. Sur.—Stdzng. 2,804 ft.

The Texas Co.'s No. 5 McLarty-A, 330 ft. S and E of NW cor. Sec. 2, Blk. 1, A.C.H.&B. Sur.—Drlg. 2,255 ft; show gas 2,235 ft.

The Texas Co.'s No. 2 McLarty-B, at center of J. M. Rose Sur.—Rig.

The Texas Co.'s No. 2 Shaw, 1,000 ft. from S and 330 ft. from W line E½, Sec. 5, Blk. 1, A.C.H.&B. Sur.—Rigging up.

Travis et als' No. 2 Back, 330 ft. each way from NW cor. E½ SE cor. Sec. 44, Blk. 25, H.&G.N.R.R. Sur.—Drlg. 2,025 ft.

Wilcox-Pampa Oil Co.'s No. 6 Comb-Worley, 330 ft. N and 990 ft. E of SW cor. Sec. 60, Blk. 3, I.&G.N. R.R. Sur.—T.D. 2,900 ft; to plug back and shoot.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Ellwood, 320 ft. from N and W lines, League 7, Wilbarger County School lands; elevation 3,363 ft.; contract depth 5,000 ft.—S.D. 1,455 ft.

HARTLEY COUNTY

Amarillo Oil Co.'s No. 9 Lee Bivins "A," C NW, Sec. 6, Blk. 21—T.D. 3,610 ft.; fish. csg.

Canadian River Gas Co.'s No. 10 Burns-A, 660 ft. N and 660 ft. E, Sec. 18, Blk. 2, G.&M. Sur.—Drlg. 3,440 ft; 2,500,000 ft. gas 3,290-3,440 ft.

HUTCHINSON COUNTY

Amarillo Oil Co.'s No. 2 Ingerton-A, 1,650 ft. from N line, 1,071 ft. from E line, Sec. 41, H.&T.C.R.R. Sur.—Drlg. 700 ft.

Gulf Prod. Co.'s No. 44 Dial, 330 ft. N and 325 ft. W of NE cor. Sec. 36, Blk. M-23, T.C.R.R. Sur.—Drlg. 2,978 ft.

Gulf Prod. Co.'s No. 45 Dial, 660 ft. S and 660 ft. W of NE cor. S½, Sec. 25, Blk. 47, H.&T.C. Sur.—Drlg. 2,728 ft; show oil 2,678 ft.

Holmes et als' No. 1 Moore, 330 ft. N and E of SW cor. N½ E 80 ac., SE, Sec. 125, Blk. 4, I.&G.N. R.R. Sur.—S.D. 410 ft.

Holmes et als' No. 2 Quinn, 990 ft. from S line and 330 ft. from E line SW, Sec. 7, Blk. 9, I.&G.N. Sur.—Cellar.

Marland Prod. Co.'s No. 1 Sanford-C, 783 ft. N and 230 ft. W of SE cor. N½, Sec. 79, Blk. 46, H.&T. C.R.R. Sur.—Drlg. 2,310 ft.

Oil Operators Trust Co. and Marland's No. 2 J. M. Stanford-B, Sec. 82, Blk. 46, H.&T.C. Sur.—S.D. 3,039 ft.

Phillips Pet. Co.'s No. 1 Johnson Bros., 330 ft. from N and W lines NW, Sec. 34, Blk. Y, A.&B. Sur.—Location.

Phillips Pet. Co.'s No. 4 Johnson-Pulaski, 330 ft. from N line and E line of W½, Mary Whitley Sur.—Drlg. 2,570 ft.

Phillips Pet. Co.'s No. 5 Johnson Bros. (Florence), 330 ft. each way from S and E line of E½, Mary Whitley Sur.—Drlg. 2,635 ft.

Phillips' No. 1 Sanford-Glass, 660 ft. S and E of NW cor. S 20 ac. of N 160 ac. of S 320 ac., Sec. 80, Blk. 46, H.&T.C Sur.—Drlg. 880 ft.

Phillips Pet. Co.'s No. 6 (Florence), 330 ft. each way from S and W lines, E½—Rig.

KING COUNTY

The Texas Co.'s No. 1 J. H. Johnson—S.D. 4,300 ft.

Huff Oil Co.'s No. 1 Martin, 1,320 ft. from N line and 1,320 ft. from E line, Sec. 171, Blk. F, H.&T.C. Sur.—Rig.

LAMB COUNTY

Dan Freed et als' No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur.—Drlg. 650 ft.

LIPSCOMB COUNTY

Brown et als' No. 1 Box T Ranch, SW NE, Sec. 612, H.&T.C. Sur.—S.D. 3,128 ft.

Ruby Oil Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur.—S.D. 4,428 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch—Small show oil 1,133-40 ft.; sand; fish. 4,167 ft.

MOORE COUNTY

Amarillo Oil Co.'s No. 1 Read-A, C NW, Sec. 14, Blk. 13-12, D.&P. Sur.—Location.

Amarillo Oil Co.'s No. 2 Warrick, C S 160 ac., Sec. 92, Blk. 46, H.&T.C. Sur.—Drlg. 2,740 ft.

Barnsdall Oil Co.'s No. 1 Harrison, 330 ft. from N line and 330 ft. from E line of S½ NE, Sec. 5, Blk. M-2.—Drlg. 1,990 ft.

Canadian Gas Co.'s No. 1 Kilgore-A, 2,716 ft. S and 2,695 ft. W of NE cor. Sec. 1, Eustis Sur.—Drlg. 2,930 ft.

Dana O. & G. Co.'s No. 1 Anthony, C NW, Sec. 260, Blk. 44, H.&T.C.R.R. Sur.—Location.

Fritch O. & G. Co.'s No. 1 Lee Burns, CNE 40 ac. of N 160 ac., Sec. 4, Geo. Mahan Sur.—Spudded and S.D.

Phillips Pet. Co.'s No. 1 Burnett, 330 ft. each way from NE cor. NE, Sec. 192, Blk. 3-T, T.&N.O. Sur.—S.D. 3,582 ft; plugged back to 2,372 ft; shot 100 qts. 3,340-72 ft; no results; to complete for gas well.

Phillips Pet. Co.'s No. 3-A Sneed, Jr., 1,600 ft. S and 430 ft. W of NW cor. J. N. Proctor Sur.—T.D. 3,135 ft; swbd. 30 bbls. 3,126-31 ft.

Phillips Pet. Co.'s No. 1 Taylor, 330 ft. N and E of SW cor. E½ NW cor. Sec. 244, Blk. 3-T, T.&N. O. Sur.—T.D. 2,650 ft.; S.D. for completion of No. 1 Burnett.

MOTLEY COUNTY

Explin. Co.'s No. 5 Matador, C, Sec. 45, Blk. J-B, C.B. &C.N.G.R.R. Sur.—Fish. 300 ft.

Explin. Co.'s No. 6 Matador, 330 ft. from N line and 330 ft. from E line, Sec. 132, Blk. M—Rig.

Matador Oil Corp.'s No. 1 Owen, C NE, Sec. 10, Blk. G B.&B. Sur.—Rig.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Ledrick, Sec. 7, Blk. 5-A—S.D. 5,975 ft.

WHEELER COUNTY

Byrens et al's No. 1 Johnson, SW cor. NE, Sec. 88, Blk. A-5, H.&G.N. Sur.—Fish. csg. 2,920 ft.

Gibson Oil Co.'s No. 7 Bentley, 330 ft. N and W of SE cor. NW SE, Sec. 42, Blk. 24, H.&G.N. Sur.—Drlg. 1,300 ft.

Gillespie et als' No. 1 McMurtrey, C NW SE, Sec. 67, Blk. 17, H.&G.N. Sur.—Location.

Lone Star Gas Co.'s No. 1 Griswold, C of NE of SE Sec. 1, Blk. 24, H.&G.N. Sur.—S.D. 800 ft.

Lone Star Gas Co.'s No. 1 Ridenger, C SW NW, Sec. 65, Blk. 17, H.&G.N.R.R. Sur.—Drlg. 800 ft.

Magnolia Pet. Co.'s No. 1 Trostle, C S½ NW SW, Sec. 120, Blk. 24, H.&G.N.R.R. Sur.—Rigging up.

Mudge Oil Co.'s No. 2 Hicks, C SE of NW Sec. 52, Blk. 17, H.&G.N.—Show gas 1,510-15 ft; cmtng. 8-in. csg. 1,712 ft.

L. W. Rook's No. 2-A Smock, C SW SE, Sec. 5, Blk. 24, H.&G.N. Sur.—Temp. abd.

The Texas Co.'s No. 2 Gordon, 660 ft. N and E of SW cor. NW, Sec. 91, Blk. 17, H.&G.N. Sur.—Drlg. 856 ft.

Upham Gas Co.'s No 1 Gooch, C NE SE, Sec. 81, Blk. 17, H.&G.N. Sur.—Location.

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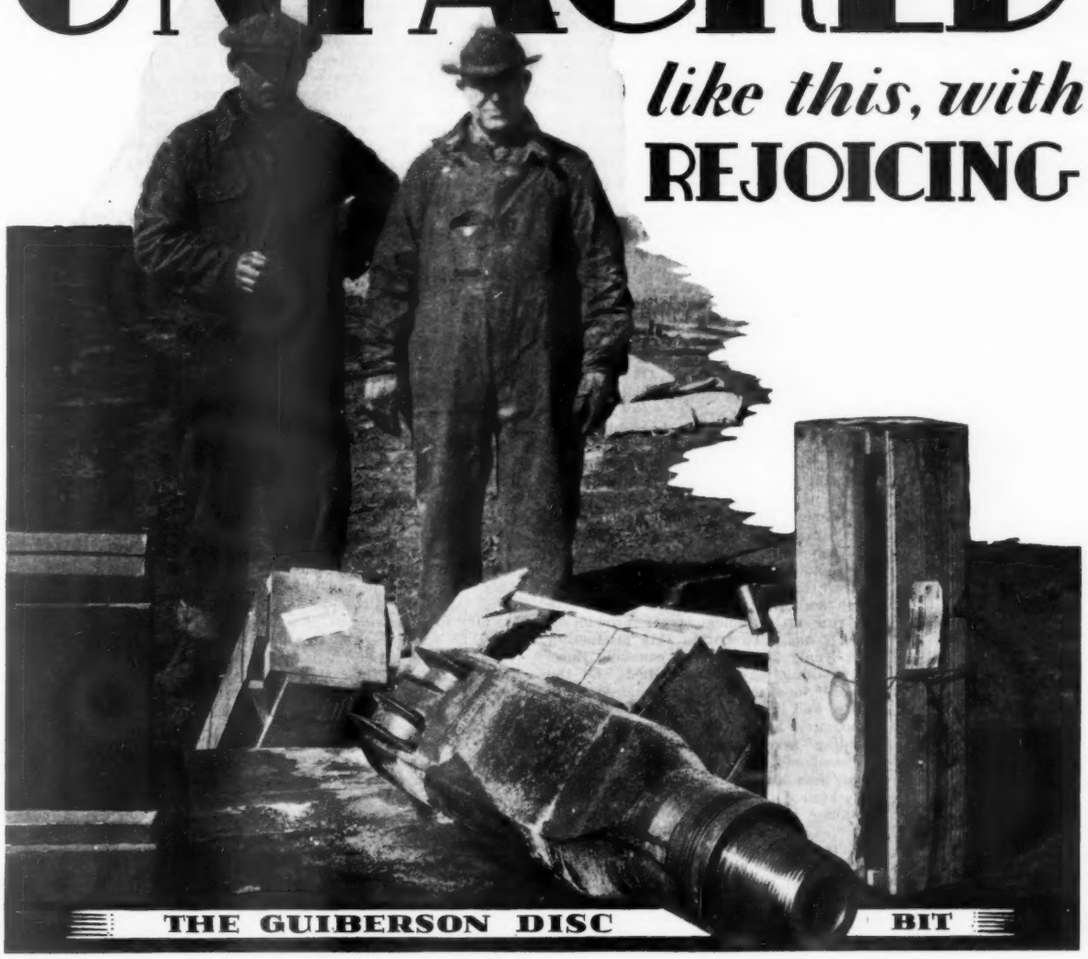

In the photo are Harry Holden, left, and Andy Smith, right, both drillers and both present at a most auspicious and joyful occasion, *the arrival of a Guiberson Disc Bit.* These boys used a Guiberson Disc Bit at Ardmore and saved ten days drilling time, making 30 to 40 feet per hour. Can't blame them for liking it.

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GUIBERSON

BETTER BE SAFE THAN SORRY

WILL BUILD NEW GAS LINE IN LOUISIANA

(Continued from Page 31)

from it in the Monroe Field, guaranteeing an ample supply for this line for a number of years. This line also will be connected with the recently completed 12-inch El Dorado-Emmett line of the Arkansas-Louisiana Pipe Line Co., a recently organized subsidiary of the Arkansas Natural Gas Corp., which ties in with the 18-inch trunk line from Shreveport to Little Rock at Trees Station at Emmett. This connection makes a complete circuit of the entire pipe line system of the Arkansas Natural Gas Corp. and subsidiaries and will make possible an arrangement whereby all towns supplied by these companies may be served by the major gas fields of this section, being the East Texas, Shreveport, Monroe and Richland, Louisiana, and El Dorado (Champagnolle), and Clarksville (Johnson County), Arkansas, areas. In addition to the lines from Monroe to El Dorado, the franchise and distribution system owned by the Industrial Gas Co. at El Dorado has been purchased by the Public Utilities Corp. or Arkansas, another subsidiary of the Arkansas Natural Gas Corp."

Line Cost About $5,000,000

What the Arkansas paid for the properties purchased is not revealed nor has any estimate of the cost of the Waskom-Monroe-Richland line been stated. However, Dixie-Gulf estimated the cost of its proposed line at around $5,000,000 and the following is quoted from a previous report on the project:

"From Alto, in the Richland Parish Field, where the gathering system centers, to a point a few miles north of Monroe, approximately 25 miles, it will be 16-inch. Some of it will be welded and part clamped, with two major river crossings, the Ouachita north of Monroe and the Red north of Shreveport. No compressor stations figure in the present contract as none probably will be needed for some time to come, natural pressure in Richland ranging around 700 pounds, being sufficient to push the gas to Waskom."

The line will probably operate at around 400 pounds. Whether these details of the Moody-Seagraves project will be retained now that all the work they did has become the Arkansas' property is not known, but undoubtedly the survey as run and the rights of way as obtained by the Dixie-Gulf will be adhered to, the survey "closely paralleling the Illinois Central Railroad passing a few miles north of Monroe, Arcadia, Ruston, Minden and Shreveport, tapping Dixie-Gulf's Houston - Waskom - Webster Parish line at or near Longwood on the Louisiana-Texas line west of Shreveport."

With the acquisition of the Latex Construction Co. and Industrial Gas Co. lines from Monroe to El Dorado and Camden, Arkansas Natural now has three lines from the northeast Louisiana fields at its disposal, the third being the old 10-inch Crusader line leased from Continental Supply Co. in 1926-27. Upon expiration of the lease, however, it is thought that it may not be renewed in view of the purchase of the two other lines.

GULF COAST FIELDS ARE STAGING A COMEBACK

(Continued from Page 31)

The earlier Gulf Coast crude, and even up until a few years ago, was chiefly Grade A stock, which contained as high as 90 per cent lubricating oil stock, became noted for its lubricating value and low cold test properties. For several years very little Grade A oil has been produced and with all the new fields producing only Grade B, except for a few wells, the bulk of the coastal output now has become Grade B, of which in many cases twice as much is required to yield the same amount of lubricating stock as is produced from Grade A crude. Thus, while coastal production is increasing sharply, the lubricating oil relatively might not be showing much change.

It is true, however, that although in the past the value of Gulf Coast crudes has been based chiefly on its lubricating oil content, Grade B, which now is the greater part of the production of this division, also contains a substantial percentage of the lighter ends of gasoline and fuel oil, and, gravity considered, compares favorably with Mid-Continent crudes for general refining.

Gravity Climbing

This being the case, by running to refineries a greater amount of Grade B crude to maintain the same lubricating oil production as before, the output of the lighter ends naturally is run up which would place coastal crudes in competition with those of other areas. As with the increase of production so the average gravity of the crude produced is climbing. The latter is due chiefly to the deeper drilling, for generally speaking the deeper the sand the higher the gravity. From this angle the newer coastal crude can be considered as breaking away from the isolation under which the Gulf Coast fields of the past have been operated by reason of their lubricating stock crude creating an entirely different situation than that which existed in other producing areas.

At the present rate of increase over last year, the Gulf Coast will produce more oil this year than ever before in its history. During the first quarter of the year, coastal fields yielded 12,890,353 bbls., according to estimates of The Oil and Gas Journal. This was a gain over the output of the same three months of 1928 amounting to 1,621,707 bbls., or approximately 14 per cent. On this basis of gain, production for 1929 will total 54,469,910 bbls.

Conspicuous among the increasing new fields is DeWalt, which a few days over 13 months old, is producing approximately 16,000 bbls. daily, placing it in competition with Pierce Junction for second place among the fields. DeWalt, which is an example of single company operation, has built up this production under a systematic and conservative program rather than competitive drilling play which accounts for the fact that it has not run up a much larger production than it has. To obtain this production figure, only 20 wells, not counting those now drilling, have been drilled. Of the 20, only one might be considered as a failure and it may make a small pumper, although it has not been completed after standing several months. At DeWalt scores of additional inside locations could have been drilled and probably would have been if the acreage had been cut up.

Among the other new areas which are expected to swell the Gulf Coast's ultimate yield, is the deep sand play on the south side of the old Humble Field, which until recently had produced more oil than any other field, Spindletop not excepted. The deep sand has yielded three wells so far, all of which have been large initial producers and in addition have indicated staying qualities. The oil also is above 43 gravity.

These, with other developing areas and recent numerous salt dome discoveries have served to change the general opinion which formerly has existed among coastal operators that this territory had been played out and now indications point to the fact that the Gulf Coast may yet become one of the country's big producers.

PRORATION SUCCESSFUL IN WINKLER AREA

(Continued from Page 32)

"clocks" the well and this detail of timing a well to allow it to produce exactly one hour is done with religious precision. While the well is flowing usually four "shake outs" are made to determine the water and b.s. percentage. One "shake out" is made as soon as the well is turned into the gauging tank and the others are made at 15-minute intervals. The average of these is used to determine the water percentage of the wells.

Sometimes the operators do not desire their wells to be opened for proration tests because of the fear of water encroachment. Such wells are penalized 5 per cent of their potential each gauging period, unless conditions warrant a bigger cut in potential.

In this connection Mr. Alsobrook keeps a field record that gives the date of the last gauge of each well. This has been found invaluable in ironing out minor difficulties. It also gives the last water percentage tests made on the well.

After disposing of the bi-monthly statement the other permanent records of the office are brought up to date and checked. One of these consists of a big producers' ledger in which the daily production of each well is recorded. Another is an overage and shortage ledger in which all of the overages and shortages are kept. A daily report is made up showing production by leases which is checked against the allowance for that lease.

All of these records are kept in the umpire's field office and are used in the compilation of special reports required by the advisory committee or the Railroad Commission. These records also are utilized by the producers in the pool whenever they are in need of such figures.

While the Winkler County plan has been the target of much criticism it nevertheless has produced the results its sponsors desired and its success has been brought about mainly by the co-operation of producers.

PANHANDLE FIELDS

(Continued from Page 39)

16 Snider was dry and abandoned at 7[illegible] feet. Walton and others' No. 4 Prideaux had an initial production of 15 bbls. at 452-99 feet. Their No. 5 Prideaux made 25 bbls. at 460-85 feet. Wilson & Van Briskirk's No. 1 Vick was dry and abandoned at 640 feet. Wise & Jackson's No. 8 Calvin made 7 bbls. at 624-32 feet. Wooten and Redd and others' No. 1 Vick was dry and abandoned at 645 feet.

RANGER COMPLETIONS
Week ending May 11
Brown County

Baker & Kynard and others' No. 1 Marr was dry and abandoned at 1,250 feet. Culberson Brothers' No. 1 Settles was dry and abandoned at a total depth of 2,039 feet. Green Production Co.'s No. 7 Moore was shot with 1 quart from 1,252-59 feet and had an initial production of 5 bbls. Owens, Inc. and others' No. 1 Turner was dry and abandoned at 1,850 feet.

Comanche County

Sawyer's No. 1 Cagle was drilled to a total depth of 2,881 feet and was dry and abandoned.

Coleman County

Texas Pecific Coal & Oil Co.'s No. 1 Gay was drilled to a total depth of 1,395 feet, found pay at 1,364-66½ feet, had an initial production of 10 bbls. oil and 12 bbls. water. It was first completed at 1,366½ feet as dry and abandoned.

Canyon Oil & Gas Co.'s No. 1 Keller was dry and abandoned at 402 feet. Barnsdall Oil Co.'s No. 1 Reily & Stockard had an initial production of 3,316,000 feet of gas at 1,453 feet. Kitchings & Geisendorf's No. 1 Witcher was dry and abandoned at 1,907 feet. Owens & Green's No. 1 Westbrook was shot with 5 quarts at 1,868-73 feet and had an initial production of 20 bbls.

Callahan County

Belva Oil Co.'s No. 1 McGee was dry and abandoned at 1,801 feet. Bradstreet & Holden's No. 12 Miller was drilled to a total depth of 1,661 feet, shot with 30 quarts at 1,624-61 feet and had an initial production of 90 bbls. Redmond and others' No. 1 Moore was drilled to a total depth of 1,865 feet, topped pay at 1,860-65 feet, had an initial production of 100 bbls. and is now making 40 bbls. on pump.

Eastland County

Mitcham and others' No. 1 Wings was dry and abandoned at 1,563 feet. Hoffman & Page's No. 1 Foster made 893,000 feet of gas at 1,470 feet.

Palo Pinto County

Gordon & Gholson's No. 1 Tkecz was drilled to a total depth of 4,077 feet, found gas sand at 4,072-77 feet and had an initial production of 2,457,000 feet of gas. Dixie Drilling Co.'s No. 1 Lone had an initial production of 3,000,000 feet of gas at 4,000 feet. Cranfill & Reynolds' No. 1 Moberly was drilled to a total depth of 1,300 feet, found gas sand at 1,145-60 feet, estimated 500,000 feet of gas, and oil show at 1,190-95 and 1,295-1,300 feet and was dry and abandoned. Simms Petroleum Co.'s No. 9 Jones was dry and abandoned at 1,465 feet.

Erath County

Snebold & White's No. 1 Tulfer was drilled to a total depth of 3,220 feet, found gas sand at 3,136-55 feet and had an initial production of 1,416-80 feet of gas.

PANHANDLE COMPLETIONS
Week ending May 11
Gray County

Eslick & McKinney's No. 1 Hopkins, 330 feet NE E half NE, Section 84, Block B-2, H.&G.N.R.R. Survey, was shot with 80 quarts at 3,130-57 feet and with 250 quarts at 3,130-62 feet and was dry and abandoned at 3,262 feet. Operators Oil Co.'s No. 1 Faulkner, Section 30, Block B-2, H.&G.N.R.R. Survey, made 65,000,000 feet of gas from 2,760-90 feet and flowed 3,860 bbls. oil in 24 hours after being drilled to a total depth of 2,790 feet.

Hutchinson County

Marland Oil Co.'s No. 1 Johnson-C topped the pay at 3,052 feet, was drilled to a total depth of 3,058 feet and had an initial production of 500 bbls. the first 24 hours. Timms and others' No. 1 Moore, located 330 feet north and east of SW cor. south 40 acres NW, Section 21, Block M-21, T.C.R.R. Survey, was shot with 240 quarts at 3,028-90 feet and had an initial production of 110 bbls. the first 24 hours.

Moore County

Skelly Oil Co.'s No. 7 Armstrong & Byrd, 2,260 feet south and 990 feet east of NW cor. J. N. Proctor Survey, swabbed 765 bbls. from 3,157-69 feet.

NEW ORLEANS FAVORED FOR NEXT CONVENTION

(Continued from Page 32)

West and Southwest where extensive natural gas fields have been developed in rceent years, the problem has been to transport this gas to markets and to sell the different cities and towns in that vast territory on the idea of using natural gas both for industrial and domestic purposes.

New Orleans made a strong bid for the next convention of the Natural Gas Department, if such a convention is held next year and that city, it may be said, is favored greatly by a large number of influential men in the department. With Henry C. Morris, president of the Dallas Gas Co. of Dallas, Texas, slated to be the next chairman of the Natural Gas Department, it is logical the next convention of the department, if held separately from that of the American Gas Association, would be held in some city in the South or Southwest.

New Orleans is being supplied with natural gas transported to that city from the northern Louisiana fields and many towns along the pipe line from Monroe, La., down through Alexandria, Baton Rouge and on to New Orleans have a greater interest now in the natural gas industry than they did a few years ago when they were forced to use other fuel.

As has been said before, however, regardless of whether another separate annual convention is held by the Natural Gas Department, the Southwest Division will continue to hold annual meetings as heretofore and it is entirely probable these meetings will attract a steadily growing following.

Some consideration has been given to the matter of holding a convention of natural gas men in Tulsa immediately prior to the opening of the International Petroleum Exposition which would permit the men interested in the natural gas industry to attend such a meeting and also to view the exhibits of equipment and material at the exposition. A number of organizations have arranged to hold meetings in Tulsa about this time each year so that their members might take advantage of the opportunity to inspect supplies and equipment used in their business.

SMOOTHER POWER

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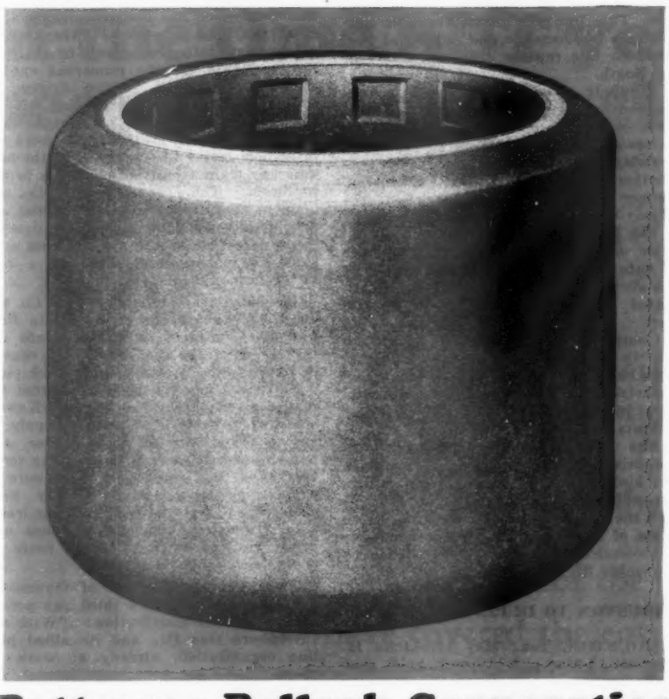

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Natural Gas Developments

LONE STAR GAS PLANS EXPANSION PROGRAM

Rapid growth of Texas has caused the Lone Star Gas Co. to plan a large expansion program for this summer. The plans call for expenditure of several million dollars and include four pipe lines totaling more than 200 miles, two large new compressor stations, remodeling of a gasoline plant damaged by fire, construction of several office buildings, building of a 24-mile telephone line, and the addition of at least a dozen cities to the distribution system.

One of the new pipe lines will be constructed from Desdemona, Eastland County, Tex., to Sipe Springs, Comanche County. This will be a 16-inch line 24 miles long and will be the start of further expansion in that territory. A 24-mile telephone system will be constructed along the pipe line and a new compressor station will be erected at Sipe Springs. Another line will be built from the company's gasoline plant at Ranger to connect with the Superior Oil Co.'s gasoline plant in the Moran district in Shackleford County. This will be a 10-inch line 20 miles long and will give a greater outlet for high pressure gas wells in southeast Stephens County and northwest Eastland County and will increase the supply of gas from West Texas to Dallas and Fort Worth.

The rebuilding of the large gasoline plant of the company at Gordon, which was damaged by fire in February, is another item of the program. High pressure lines will be moved a considerable distance from the plant for safety.

Another line will be built from Gainesville north and west through Lindsay, Myra, Muenster and St. Joe, 20 miles, and a large new compressor station will be constructed at Gainesville to boost the supply of gas from Oklahoma and give additional supplies to Sherman, Denison, Paris, and Hugo, Okla. This plant will cost about $70,000. A 10-inch line will be laid from Gainesville Junction to the gasoline plant at Gainesville, a distance of 4 miles.

A new office building of the Fort Worth Gas Co., one of the Lone Star affiliated companies, will be completed this summer and another building is soon to be announced in a city on the south end of the line.

The largest element of the program has already been announced. It is a proposed new 20-inch line from Petrolia to Fort Worth and Dallas which will have a capacity of 100,000,000 feet of gas daily. It will draw gas from the great Panhandle Field near Amarillo, Tex.

NATURAL GAS OFFER

CHATHAM, Ontario, May 11.—Central Pipe Line Co. of Chatham recently made a second offer to supply natural gas to the St. Thomas municipal gas plant in wholesale quantities, delivery to be made at the city limits, the city handling the distribution through the present artificial gas system. The company quoted a price of 50 cents per 1,000 feet for the first 50,000,000 feet supplied annually; 45 cents per 1,000 feet for the next 50,000,000 feet; and 40 cents per 1,000 feet above 100,000,000 feet. On the present artificial gas consumption of 70,000,000 feet a year the rate would average 48½ cents. The project involves construction of a 25-mile pipe line connecting the city with the Vienna and Richmond Fields. R. J. Christie, superintendent of the municipal plant, estimated that, allowing for distribution cost, outstanding debentures and a 10-cent profit, the retail rate for 50-cent natural gas would be $1.20 per 1,000 feet.

TRAINING SCHOOL MAKES SHIFT TO NATURAL GAS GO LIKE CLOCKWORK

By H. C. Abell
Vice President, Electric Bond & Share Co., New York*

Several weeks before natural gas arrived in Memphis, plans were perfected for handling the conversion of customers' appliances. The city was divided into four districts on a map. A survey was made of each district to determine the number of customers, kind of appliances in use, including make, number, types of orifices, etc. A card was prepared covering each customer's requirements. Since the parts required for the adjustment of ranges and tank heaters are small, it was first thought that it would be practical to put the parts required for each customer in a heavy paper envelope and have these routed so that each adjuster could have the proper parts for each particular customer all selected. It was found after the survey had been completed that the number of customers listed was considerably less than the number on the ledgers and it was decided the only safe procedure was for the adjuster to call at every house in his territory.

The division into four districts was governed chiefly by the layout of the distribution system. Each district was divided into 16 precincts. The field organization for conversion was as follows:

There were four majors, each in charge of four precincts. Each major had four captains under him, one captain to each precinct. Each captain had 13 men. Of these men 12 were adjusters while the thirteenth was a stockkeeper in charge of a covered box containing tools, parts, etc. This box was stationed at a central point in the precinct until precinct was completed. It was locked at night after work stopped.

Adjuster Visits Each House

Each adjuster had a canvas bag containing necessary tools and orifices, adapters, etc. He started at a corner of a block and went from house to house around the block. The captain followed up his men, inspected their work and checked up on the amount of work done. He turned in a report each night to his major and the major in turn reported to the superintendent of conversions. From these reports a daily conversion report was compiled from which the superintendent of the gas department could determine the progress of the work each day and arrange for the turning in of the next district at the proper time.

Approximately 250 men were used for customer conversion and as the regular work had to be at least partly carried on during that period it was necessary to hire green men and train them for the conversion work. The company was fortunate in possessing in its service building a large auditorium and this was converted into a training school by the installation of typical appliances of all kinds. Appliances were selected for this school, with a view to giving the men experience with appliances which they would meet with in practice, not only the more up-to-date models of ranges, water heaters, etc., but also the more or less obsolete models which would require special treatment for proper adjustment. It was felt that a more specialized training was necessary for handling automatic water heaters of which there were several thousand on our lines, so a special squad of 22 men were trained for this work.

Paid While in Training

All the men were paid while in training. They were first instructed in the proper adjustment of appliances with manufactured gas. They learned how to take appliances apart and assemble them again. They learned the names and functions of the various parts. They were then taught special methods to be employed such as peining orifices and then

(Continued on Page 100)

*Excerpt from paper presented before the Natural Gas Department of the American Gas Association in Kansas City, in which Mr. Abell described problems encountered in changing over from manufactured gas to natural gas in New Orleans, La., and Memphis, Tenn. The major part of the paper appeared in The Oil and Gas Journal of May 9, 1929.

LINE TO BIRMINGHAM GOING ON TO ATLANTA

NEW YORK, May 11.—Ford, Bacon & Davis, Inc., announce having entered into a contract with the Southern Natural Gas Corp. for the construction of the natural gas pipe line to extend from the Richland and Monroe Fields in Louisiana to Atlanta, Ga., via Birmingham, Ala. This line will make available natural gas for domestic and industrial purposes to this rapidly growing section of the South.

A supply of gas for the line has been assured by 20-year contracts which have been entered into with subsidiary companies of the Electric Bond & Share Co., Standard Oil Co. of New Jersey, the Southern Carbon Co., United Carbon Co., Palmer Corp. of Louisiana, and the Moody-Seagraves interests.

The Monroe and Richland fields comprise one of the largest known deposits of natural gas, the reserves controlled by the above-mentioned companies being estimated at more than 3,300,000,000,000 feet.

Contracts for the sale of gas to be run in the new pipe line have already been entered into with a large number of industries along the line and for distribution in a number of cities, including Atlanta.

The new line will be one of the most extensive natural gas utility projects in the history of the industry, involving an expenditure of approximately $35,000,000 and the construction of more than 1,400 miles of pipe line. The contract requires the completion of the line to Atlanta by December 31, this year.

HOUSTON TO DUPLICATE MAINS

HOUSTON, Tex., May 11.—John H. Freeman, acting city attorney, holds that both the Houston Natural Gas Co. and the Houston Gas & Fuel Co. have the right, under their respective franchises, to lay gas mains throughout the city; and that the right of each to duplicate existing mains (either of the other company or of its own) is given in franchises granted by the old city council. Mr. Freeman will ask R. C. Fullbright, rate authority, to prepare an opinion of the rate question involved in the duplication of mains, providing such an opinion is desired by the city council.

GENERAL GAS HOLDINGS SOLD

United Gas Improvement Co., controlled by the Morgan interests, has sold its entire holdings in General Gas & Electric Co. to the Associated Gas & Electric Co., according to a joint statement issued by United Gas Improvement and the Associated system. Associated Gas now has complete control and is expected to link General Gas properties with its own system.

THREE COMPANIES PLAN TO SUPPLY OWENSBORO

By Whit

OWENSBORO, Ky., May 13.—The city of Owensboro is now assured of a gas supply, as a report is current that W. A. Battan, oil operator, who holds franchises for the distribution in Owensboro as well as for the laying of a gas line from the gas field to Owensboro, has closed transactions with the Continental Gas Service Co., of Tulsa, whereby the latter purchased his franchises and will start work both in the city and county immediately looking to bring natural gas from the field into Owensboro and the distribution of the natural gas after it has been delivered to the city limits. According to reports the Continental has contracted for the gas supply of the Wood Oil Co., Inc., and the L. C. Young interests, representing extensive holdings in the gas fields.

The Missouri-Kansas Pipe Line Co. announces through its representative in Owensboro, W. H. Hinchey, that it will also lay a gathering line from the fields to Owensboro where the gas will be distributed in the city by the Owensboro Gas Co., which has been furnishing artificial gas, and expects to have natural gas coming into Owensboro by July 1. Arrangements for the numerous cut-ins and relays in the service system in Owensboro have been made and will be rushed to completion as soon as the pipe arrives so that work can go ahead on these new mains to connect with the natural gas main from the gas fields to the southeast. The Owensboro Gas Co. announces that it has already ordered approximately $75,000 in new equipment made necessary in the change from artificial to natural gas, including a carlot of new style meters.

The Missouri-Kansas Pipe Line Co. has completed taking the route of its field line and contracts have been made for the laying of the line which will consist of several carlots of 8, 6 and 4-inch pipe.

Sufficient gas has been contracted for it was given out by the Missouri-Kansas company to assure an ample supply of gas to Owensboro for a long time, and numerous new leases in proven gas territory have been secured to make sure of supply. Contracts have already been made with operators to drill the gas leases near Owensboro, starting at once and other drilling outfits are en route to Owensboro.

The Messenger-Inquirer of Owensboro has this to say on the third gas permit sought in local distribution: "With the Owensboro Gas Co., and its allied pipe line organization, already at work on preparations for providing natural gas for Owensboro with an assurance to have the gas for its customers by July 1, and the Continental Service Corp., of Tulsa, giving out it will begin immediately to prepare to give such service, comes the Greenspon interest of St. Louis, to submit a proposition for a franchise. The schedule of prices to be embraced in the franchise they will ask starts with a minimum charge of 75 cents per month with the highest price for gas fixed at 60 cents per 1,000 feet. Each 1,000 feet, after the first is reduced by 1 cent up to 11,000, when the price for the next 25,000 is fixed at 49 cents per 1,000 feet. A reduction of 1 cent is then made in each 25,000 feet until a price of 40 cents is reached, then 39 cents is fixed for the next 500,000 feet. After that a reduction of 1 cent is made on each additional 100,000 feet up to 1,000,000 feet, which is to be sold at a price of 35 cents per 1,000 feet. These figures for the Greenspon interests are furnished by Jackson Stanford, who made up the rate for submission."

IT HAS BEEN SAID:

EXPERTO CREDE*

"You can fool some of the people some of the time BUT you can't fool all of the people all of the time."

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Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

EFFECTS OF WELL SHOOTING

I have heard some interesting arguments upon what shooting an oil well does to the oil sand exposed in the well. Do you believe the sand is extensively fractured by shooting? What other effects does shooting have upon a sand?—E. D. S.

The old and popular idea that shooting an oil well creates extensive fractures radiating through the sand from the well is probably not correct. Whatever fractures are formed are probably of small extent. This opinion is based upon the pulverizing effects of shots placed in sandstone in underground mining operations, and upon the very limited fracturing of sandstone as compared with the effects of shots in igneous and metamorphic rocks where the fracturing is much more extensive. A point of this kind is clear enough in mining work, but it is subject to much argument and difficult or impossible to prove in connection with oil well shooting, because we can not go down and examine the oil sand.

Probably one of the principal effects of shooting an oil well is to enlarge its periphery in the oil sand. Shot cavities become so large that bailers and tools have been lost in them without interfering with subsequent pumping operations. Under such conditions the effect of shooting must be to knock down and clean away the face of the sand that becomes plugged up with paraffin and mineral salts in old wells.

One of the most important effects of shooting oil wells is probably the shock or jar that liberates gas from solution in the oil. Experiments by the Experiment Station at Bartlesville, Okla., have indicated that a shock or jar tends to cause the immediate release of gas that would otherwise remain in solution. This liberated gas stimulates the movement of oil to the wells.

CONCERNING WATER CONING

I wonder if you can explain to me just what is meant by water coning. I see it referred to often, especially in articles about the gas lift. I would like to know just how this water coning, as they call it, interferes with a flowing well.—L. G. A.

The theory of water coning is one concerning which there is uncertainty. What is supposed to take place underground might be illustrated by the use of a handkerchief, a glass tube about 6 inches long and some sawdust. Spread the handkerchief out flat on the bottom of a small box or ordinary cake pan. Cover the handkerchief with about an inch of sawdust. Stand the glass tube upright on the sawdust. The sawdust will represent an oil sand. The handkerchief will represent a water formation immediately under the oil stratum. The tube is our well hole.

Now since water is heavier than oil, it will remain below the oil in the absence of any lifting action in the well caused by an upward rush of gas and oil. The water is subjected to pressure from underneath. In the event of a rushing of gas and oil up the well hole the pressure on the top of the water stratum is removed, of course, at that point, with the result that the water will begin moving in the direction of the lowered pressure. That direction is up into the well hole, past the face of the oil sand. Thus, it is believed, a cone of water is created, covering the whole face of the sand and perhaps shutting off entirely the flow of oil into the hole.

How this comes about may be seen by returning to our illustration. At one end of a slender stick attach a fish-hook or similar device. Run the stick down through the tube (well hole) and on through the sawdust (oil sand) to the handkerchief (water formation). Engage the hook in the handkerchief and draw it slowly upward. The handkerchief (water) will assume the shape of a cone in the bottom of the tube (well hole) and its position will show fairly well how the coning water at the bottom of a well hole is believed to shut off the entrance of oil into the well.

Engineers attribute coning up in great part to unrestricted flow, whether produced naturally or by gas lift. The usual practice for overcoming this coning up, which may ruin a well, is by employing back pressure. If the rock pressure of the oil sand will allow a marked reduction of the differential pressure, then the water cone may be forced downward, again freeing most of the face of the sand and causing most of the water to remain at the bottom.

KEROGEN NOT AN OIL

What kind of oil is kerogen? The word does not appear in the dictionary and oil men that I have questioned do not seem to know. One man told me it was the same as kerosene, but I am sure that is not true on account of the use I have seen made of the word.—D. E. F.

Kerogen is not an oil although it is a source of oil. Dr. Ernest R. Lilley, in his "Geology of Petroleum and Natural Gas," says:

"Kerogen may be defined as a carbonaceous substance present in some shales which on being heated produces a crude oil having much the same character as petroleum. Under the microscope kerogen appears to consist of minute globules or irregular laminae of yellow to dark brown or nearly black matter. The percentage of this material present bears a very definite relationship to the amount of oil that can be extracted from the shale. In true kerogen shales the percentage of kerogen present is always less than the amount of ash or true mineral matter. There is considerable difference of opinion as to the exact character of kerogen. Some consider it to be an inspissated petroleum, somewhat altered and adsorbed by the shale particles. A more general view is that the kerogen is indigenous to the shale and is the product of alteration of organic matter. Regardless of the theory supported it is certain that the products of the retorting of shales are not the products of ordinary distillation, as the term might be used in reference to the boiling of water, gasoline or kerosene, but the products resulting from the 'destructive distillation' of the kerogen."

WHY IS IT CALLED THAT?

MOTHER HUBBARD BIT

A drilling bit that performs well in one formation may not be so satisfactory in another. The Mother Hubbard, while widely valuable, is especially useful for working in a hole that muds up easily or where the rock is hard and contains wide seams. The name is supposed to have been suggested by its fancied resemblance to the Mother Hubbard gowns worn by women in the latter part of the nineteenth century and the subject of derisive comment.

The bit is almost as wide at the top as at the cutting point and the steel is exceptionally thick, with the result that the bit so nearly fills the hole that it is not likely to slip off into slanting openings. The water course is wide and rounding. The sharp shoulders on the bit cause it to cut its way through the mud when pulling out. Another name for the tool is paddle bit.

ESTIMATING DEPTH OF WELLS

Although there are few cases nowadays where information concerning a drilling well is kept from the oil scouts, it does sometimes happen. There are cases too where a driller for some personal reason or prejudice will try to mislead a scout. I believe there is a form for figuring the depth of a well from the number of times the drilling line is wound around the bullwheel. That system would be very helpful when a man has reason to believe the drilling crew wants to give him phoney figures. Could you tell me if there is such a form and what it is?—T. T. D.

The approximate depth of a well may be obtained quite simply by any man who has an opportunity to note the number of times the drilling line is wrapped around the bullwheel shaft. Tables for computing well depths in this way are given in Dorsey Hager's "Practical Oil Geology." The tables assume a bullwheel shaft 14½ inches in diameter and 3 feet 9 inches in circumference, using three-fourths-inch or seven-eighths-inch wire line or 2¼-inch Manila rope. Since the drilling line is wound on the bullwheel shaft in successive layers or coils, it is necessary for a man who desires to estimate the well depth to note how many times the line encircles the shaft in each of these coils. The tables show the length of line in each coil composed of a given number of turns or wraps.

For instance, the length of 2¼-inch Manila rope on a bullwheel shaft having one coil of eight wraps is 35.04 feet. The total length of a line on a shaft is the sum of the lengths of line in each of the several coils. Thus, as the table shows, the length of three-fourths-inch wire line on a bullwheel shaft having three coils of nine wraps each, with the fourth, and outside, coil of five wraps is the sum of the length of line in the

First coil of 9 wraps, or.....	35.91 feet
Second coil of 9 wraps, or.....	39.42 feet
Third coil of 9 wraps, or.....	42.93 feet
Fourth coil of 9 wraps, or.....	25.80 feet
A total of.....	144.06 feet

If the length of line in a coil of more than 10 wraps is required, it may be computed by multiplying the length of one wrap, as given in the first line of each table, by the number of wraps. Thus the length of seven-eights-inch wire line on a bullwheel shaft containing two coils or layers of 20 wraps each is the sum of the length of line in the

First coil of 20 wraps, or 4.02 × 20, or	80.40 feet
Second coil of 20 wraps, or 4.48 × 20, or	89.60 feet
A total of	170.00 feet

JOINT ABSORBS EXPANSION

I would like some information on what I believe is called an expansion joint for pipe lines. This is a welded joint that is designed to prevent any injury from expansion or contraction. I am quite sure I read something about this joint in The Oil and Gas Journal, but I cannot find it in the numbers I have kept and I might be mistaken. The article I saw it in was about a pipe line that was being laid in Texas or Louisiana.—A. R. N.

The expansion joint to which you refer was used in the construction of a welded gas pipe line tapping two fields in northeast Louisiana. The line, built for the Magnolia Gas Co. is 25 miles long. It was described in The Oil and Gas Journal of August 2, 1928, in an article on "Innovation in Pipe Line Construction." Adding to the interest in this line is a modified form of the bell and spigot joint.

The expansion joint is in two parts, the inner one of which is a short section of pipe of the same diameter as the line pipe floating in a sleeve welded to the line pipe at each end. The sleeve has three expansion rings or corrugations whose outside diameter is approximately 2 inches greater than the diameter of the line pipe, and a width of 1½ to 2 inches each. These corrugations are about 2 inches apart. They take care of contraction and expansion, absorbing tension otherwise borne by the welds and sliding the pipe over the floating member. The expansion joint assembly is welded on at the factory.

CEMENT IN CROOKED HOLE

Does a crooked hole interfere with a cementing job? If a hole is known to be crooked what methods ought to be followed in cementing the water string to avoid leaving any condition that might cause trouble later?—B. G. A.

The crooked hole does not interfere with the cementing operation in itself, but it might interfere seriously with the results which it is expected to gain by the cementing job. Where the hole is not straight there are likely to be points where the casing will lie in immediate contact with the formation wall, with the result that a cement bond at that point is made impossible.

1935
1934
1933
1932
1931
1930

Looking ahead

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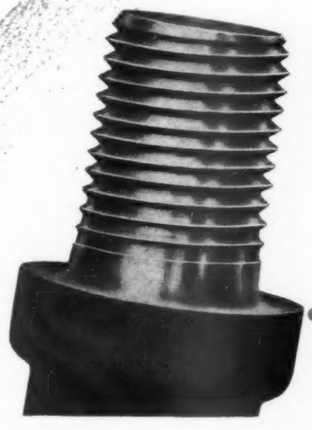


THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY

Axelson
OIL WELL PUMPS
& SUCKER RODS

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

SULPHUR REMOVAL FROM GASES

When removing sulphur from natural or manufactured gas by any of the common methods, the sulphur is usually lost. Is any process known which recovers this sulphur in pure form or puts the sulphur in some form which makes it have a commercial value?—G. E. J.

In one of the methods applied especially to the purification of manufactured gas, iron oxide serves for the absorption of the sulphur and the resulting product is then burned, in place of the sulphur ores, for the manufacture of sulphuric acid. A recent invention has appeared in an improved process in which the sulphur is recovered in pure form.

This process was described in the twenty-eighth report of the Committee of Gas Manufacturers in Germany, from which the following information is taken: Doctor Englehardt appears to have been the first to conceive the idea of decomposing the sulphur compounds in gas by oxidation in the presence of activated carbon as a catalyst.

The reaction expected and obtained is indicated in the following equation:

$$2H_2S + O_2 = 2H_2O + 2S$$

This reaction proceeded too slowly at ordinary temperatures; it could have been accelerated by increasing the quantity of air and the temperature, but this was not desirable, and there was also a fire risk.

Doctor Englehardt then tried the well-known reaction of the mutual decomposition of sulphur dioxide and hydrogen sulphide, namely:

$$SO_2 + 2H_2S = 2H_2O + 3S,$$

but the difficulty in this case was to maintain equivalent proportions of the two gases so that on the one hand the hydrogen sulphide was completely decomposed, and on the other hand no excess of sulphur dioxide remained in the gas. This difficulty caused Doctor Englehardt to return to his first method, but to endeavor to find some additional catalyst to accelerate the reaction. After many experiments he realized that a small amount of ammonia in the gases would have the desired effect.

A description of the procedure at Recklinghausen, where the process was tried out, will indicate the nature of the process. A coal gas containing 8 to 10 grams of hydrogen sulphide per cubic meter was washed to remove most, but not all, of the ammonia it contained and air was added to make the oxygen content 0.8 per cent. Naphthalene, if present in quantity, must be removed, but this is sufficiently reduced in washing the gas to recover benzol, etc. The actual adsorption of the sulphur by the activated carbon is effected best at a temperature 35 degrees Centigrade, which in winter is ensured by steam-coil heaters.

In dissolving ammonium sulphide the carbon is saturated by a solution of this substance and the sulphur is completely dissolved in from 30 to 60 minutes. The solvent is drained away and after one or two washings with lightly saturated solution it is freed from the adhering portion by passing in steam at 100 degrees Centigrade. The sulphur is freed from moisture by centrifuging.

The activated carbon used is a lignite coke activated by steam at a temperature of 900 degrees Centigrade. Its price is only about a tenth of that of the activated carbon used in benzol recovery.

KEROSENE CARBURETOR

What is the chief objection to the use of kerosene in the place of gasoline for automobile use? Is a special carburetor required?—T. G.

The modern automobile engine has been developed for the consumption of the very best grade of gasoline obtainable in sufficient quantities and kerosene is not made for rapid evaporation as is required under ordinary motor conditions. The common carburetor as designed for gasoline has not the flexibility necessary for kerosene. The quantity of air mixed with kerosene is not easily controlled and the excessive quantity of oil admitted to the cylinders results in the deposition of carbon. There is also the matter of crankcase dilution with a heavy fuel, such as kerosene.

There are several arrangements and modifications of carburetors which are said to produce good results with the heavier fuel. There was a description of a kerosene carburetor in The Petroleum Times, April 13, 1929, page 671, which gave a report of an investigation of the device by the Technical High School, Munich. The material furnished is from this article.

This carburetor is reported to function well in the throttled positions when running under full load, thus leaving to the engine the same adaptability as the gasoline carburetor, and to give perfectly satisfactory service with passenger car engines of 2,000 r.p.m. up to the extra high speed engine of 5,000 r.p.m. The carburetor tested consists of a carburetor case with a spray and vaporizing device, and is fitted to the exhaust pipe. A suction pipe leads from this carburetor body to a switch cock which permits of starting the engine on gasoline, and when switched over to the heavy oil, permits of regulating the supply of the mixture by means of a cock which acts as a throttle. With this switch cock is connected the gasoline carburetor, which is switched off after the carburetor body has warmed up and remains cut off, because restarting on gasoline is only necessary when the engine and the carburetor body have cooled down completely. Gas oils, in addition to kerosene, have been utilized with this device.

The report from the Technical High School may be summed up as in the following: The vaporizer works satisfactorily with full gas and in all positions of the throttle. The exhaust is clean and without smoke. The mixture sucked by the engine and prepared in the vaporizer does not condense in the engine, so sooting, or carbonization of pistons and cylinders, is prevented. The spark plugs remain in good condition. A saving in fuel is accomplished.

HYPOCHLORITE TREATMENT FOR NATURAL GASOLINE

Which is considered the better, calcium hypochlorite solution or the sodium solution, for treating natural gasoline? Why is it necessary to keep these solutions of about constant strength? What is an easy method for testing the solution?—C. H. T.

Either the sodium or calcium hypochlorite solution may be used when sweetening natural gasoline, the sodium solution is considered the better because of easier handling due to the absence of insoluble material. The concentration of the solution should be between 5 and 8 grams of available chlorine per gallon of solution and the alkalinity should not be greater than 3 to 5 grams of caustic soda per gallon of solution.

The reasons for the quantity balance of the chemicals were given by Doctor Dunstan, who is credited with the invention of the hypochlorite process, in The Oil and Gas Journal, December 13, 1928, page 138. In this article he said: "The product is first washed with a solution of caustic soda for the purpose of removing hydrogen sulphide and then we proceed to remove the mercaptans. The lower the molecular weight of the mercaptans the easier the work of the caustic soda solution. Some will dissolve only to the extent of about 30 per cent in a soda wash that would remove the whole of methyl mercaptan and hydrogen sulphide. You can not get complete removal by that means. We had to turn to some other method of removing sulphide and the balance of the mercaptans. Our early work was based on oxidation.

"We took up the idea of using hypochlorous acid, which was an obvious line of attack. We also used bleaching powder but we soon found ourselves in trouble. The whole point of the hypochlorite treatment is this, that the salts hydrolyze to form hypochlorous acid and that is the active agent. The more alkali you put in the more you drive the equilibrium to the side of the salt and reduce the concentration of the free hypochlorous acid, and the more you slow down the reaction the more specific the reaction becomes.

"Let us take a few cases that can be illustrated. If you oxidize a mercaptan with hypochlorite then your main product is a disulphide. If you take, on the other hand, an alkyl sulphide, you get sulphones and with a disulphide you get acidic products. In some cases we have actually isolated a trace of ordinary free sulphuric acid. If that acid increases in concentration it neutralizes the alkali previously put in and you may get a rapid reaction setting in when free hypochlorous acid is produced.

"We make our hydrochlorite solutions now by passing chlorine from the tank cars into milk of lime and by a curious circumstance at a moment when you have the right amount of chloring in the mixture the color changes from white to pink, a permangante being formed and it gives the operators very excellent indication of the course of the reaction. This strong calcium hydrochlorite, 0.2 to 0.2½ normal in strength, is diluted to 0.3 normal and it has just about the right concentration of free alkali to prevent this sort of reaction going on.

"After the operation the treated gasoline is merely washed with soda to remove traces of acid bodies produced in point of fact to remove the very minor traces of chlorine compounds that are formed. By using a countercurrent treatment we get a sulphur content of an ordinary gasoline, of about 0.03 to 0.035 per cent, and a chlorine less than 0.01 per cent.

"But, if by any chance the alkali concentration has been allowed to become too small, then you are in trouble with chlorination. The whole thing depends on the accurate concentration of the alkali."

The general principles of the control are indicated in the above but it is advisable to have such details under the supervision of a competent chemist.

VOLATILITY OF GASOLINE

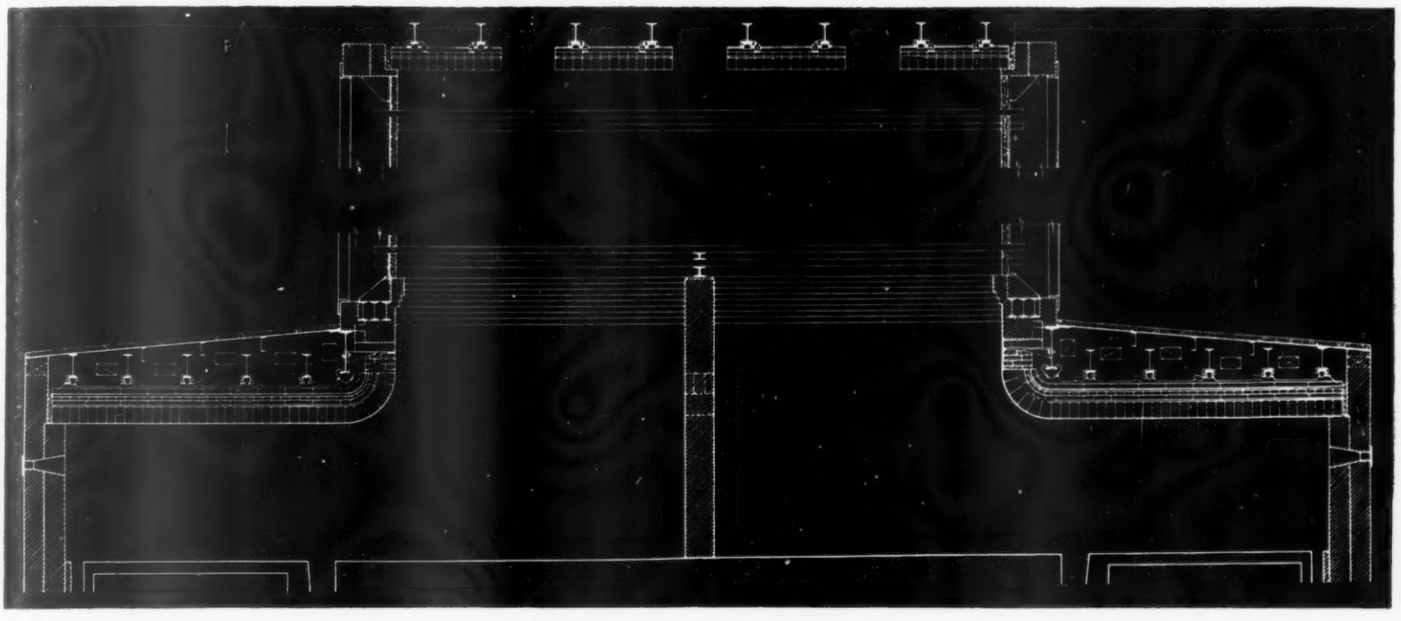
Is it correct to judge a gasoline for volatility on the distillation temperatures for the first 20 per cent or should the entire range be taken into consideration? What I am trying to get is a reliable method for classifying the different gasolines that are sold in my territory, and to arrange them in order of merit for volatility, so this definition will be of considerable assistance.—R. G. G.

It appears that all of the temperatures obtained by the distillation test must be considered when endeavoring to arrive at a conclusion concerning the volatility of a gasoline. There was a paper on the May program of the meeting of the American Chemical Society at Columbus, Ohio, Gasoline Volatility Survey by Distillation Data, by Lauren B. Hitchock, which may give you some suggestions. This paper will probably be published by the society, and the material below is an abstract.

Volatility is one of the important characteristics of gasoline. Three kinds of volatility are recognized: (1) starting volatility, (2) weathering volatility, and (3) operating volatility. Bridgeman and others of the Bureau of Standards have supplied a definite correlation between A.S.T.M. distillation data and equilibrium air-distillation data which permits pertinent deductions to be made readily regarding starting and operating volatility. Use of this method is made in a comparative study of all automotive fuels sold in a large American city during the winter of 1928-29. A graphical application is developed from the above method which enables maximum air-fuel ratios ("leanest mixtures") to be readily obtained for any automotive fuel under given conditions of engine starting temperature and air-vapor mixture concentration. Typical gasolines examined are classified according to this index of starting volatility. Recent A.S.T.M. distillation data for representative fuels at present on the market are presented. While the initial 5-15 per cent of the A.S.T.M. curve is now quantitatively associated with starting volatility, the present conventional shape over that range may be modified to conform more closely to the optimum evaporation curve indicated as a consequence of Bridgeman's method.

The general appeal of the term high test gasoline has led to its adoption in a few unwarranted cases, although no formal definition as yet exists by which to legally rule in the matter. By general usage and trade custom the term is understood to mean a gasoline whose distillation curve is substantially lower (more volatile) than U. S. Motor fuel, but further than that there is no additional qualification upon which all are entirely agreed. The term high test gasoline carries no significance as regards antiknock, corrosive, gum-forming, or other properties, although such fuels may and often do have improved characteristics of these types as well. United States specification covering fuels of this higher volatility classification should be drawn up, describing this grade definitely in the same way that ordinary gasoline has been defined.

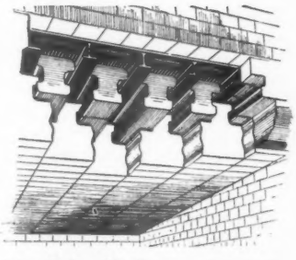
Liptak Suspended Furnace Arches



Used on Cross Tube Stills

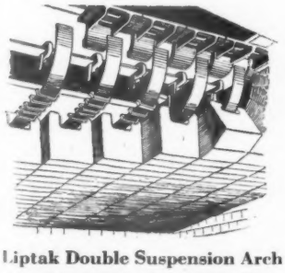
by Indian Refining Co.

One type of arch and wall construction will not give the best results in all kinds of furnaces and under all refinery operating conditions. Appreciation of this fact is the reason for the Bigelow-Liptak products listed at the right and is an important factor in the success that Bigelow-Liptak has experienced in helping refiners solve their furnace problems.



Liptak Double Suspension Arch

7″ of fire arch can be safely burned away—double refractory thickness and breaking joints minimize radiation loss and air leakage—12″ of refractory separates arch face from nearest cast iron.



Liptak Double Suspension Arch

Any block replaced without disturbing others—design and erection simplicity.

The various types of Bigelow-Liptak suspended walls and arches have at least one common characteristic—they do reduce furnace maintenance costs and the time stills are off stream.

The Indian Refining Co. uses Liptak Double Suspension Arches for the combustion chambers of its Cross Tube Stills and Liptak Single Suspension arches for the roofs above the tubes where the service is not so severe. The Indian Refining Co. reports that these arches are entirely satisfactory. Liptak Double Suspension Arches have 7 inches of fire arch that can be safely burned away—radiation loss is minimized by double refractory thickness . . . breaking joints through both fire and reserve arches reduces air leakage to a minimum . . . 12 inches of refractory material separates arch face from nearest cast iron . . . erection is easy . . . expansion and contraction does not affect furnace walls.

Liptak Single Suspension Arches are extremely simple in design and easy to erect; any tile can be quickly replaced without disturbing any other tile. They have long life, and expand and contract freely without imposing stress on the furnace walls.

Competent engineering service is available to help solve your furnace problems. Write for information.

BIGELOW-LIPTAK

Products:

Bigelow Suspended Wall, Liptak Type "X" Wall, Liptak Type "S" Wall, Liptak Double Suspension Arch, Bigelow Suspended Arch, Liptak Single Suspension Arch.

A few of the Refiners using one or more of these Products:

Gulf Refining Co.
Indian Refining Co.
Magnolia Petroleum Co.
Manhattan Oil Co.
Marland Refining Co.
National Refining Co.
Roxana Petroleum Co.
Simms Oil Co.
Sinclair Refining Co.
Skelly Oil Co.
Standard Oil Co., (Ind.)
Standard Oil Co., (New Jersey)
Sun Oil Co.
Texas Pacific Coal & Oil Co.
Tidal Refining Co.
Tide Water Oil Co.
Union Oil Co.
Vacuum Oil Co.
Warner-Quinlan Co.
White Eagle Oil & Refining Co.

BIGELOW-LIPTAK CORPORATION

5059 Woodward Avenue Detroit, Michigan

Sales Offices in Principal Cities—Main European Office: Liptak Furnace Arches, Ltd., 38 Victoria St., London, S. W. 1, England

MEN KNOWN IN OILDOM

James A. Bermingham

Election of James A. Bermingham as a director and vice president of The Texas Company of California was announced on the last day of April by officials of the petroleum concern. At the same time it was announced that Mr. Bermingham also has been appointed manager of the producing department of the company, that department embracing the drilling, natural gasoline, geological and lands and leases divisions. The new executive went to Los Angeles recently from Denver, Colo., and took over his new duties with The Texas Company immediately upon his election.

In point of service, Mr. Bermingham is one of the oldest independent operators in the oil industry, and is widely known particularly in the Mid-Continent fields. He got his start in 1902, at Beaumont, Tex., during the Spindletop boom, and later operated independently until he became associated with the Simms Oil Company. He had charge of producing activities for that company in West Texas. In 1927 he joined The Texas Company and was assistant division manager at Fort Worth, Tex., until he was elevated to vice president and production manager of the Texas Production Company with headquarters at Denver. The Texas Production Company, an allied Rocky Mountain corporation, operates in Colorado, Wyoming, Utah, Montana and Canada. Mr. Bermingham remained with that company until he was called to Los Angeles recently.

The producing department of The Texas Company of California, now taken over by the new executive, was in charge of C. E. Olmsted until last December when Mr. Olmsted was selected as vice president and general manager.

PERSONAL PARAGRAPHS

E. P. Lyons was recently appointed treasurer of the Italo Petroleum Corporation.

* * *

Lou Harrington, secretary of the National Oil Show, Inc., visited Tulsa last week.

* * *

W. Gould, assistant general manager of the Shell Company in Australia, recently arrived in London.

* * *

Sir John Cadman has returned to London, England, from an inspection of the oil fields in Irak and Persia.

* * *

F. O. Martin, of the Union Oil Company's geological department, who spent several years geologizing the company's holdings in South America, recently departed for a pleasure trip to Germany.

F. A. Garrett, vice president of the Tidal Refining Company, Tulsa, is making a business trip to New York and other eastern points.

* * *

Clarence M. Fuller, president of the Richfield Oil Company, has returned to Los Angeles, Calif., following a business trip to New York.

* * *

R. A. Broomfield, president of the Barnsdall Oil Company of California, has just returned to Los Angeles following a business trip East.

* * *

Mr. and Mrs. John C. Looker have returned to their home in Bradford, Pa., after a winter spent in St. Petersburg and other Florida points.

* * *

W. L. Greiner, of Denver, Colo., recently elected treasurer of the Midwest Refining Company, was a recent visitor to the Casper, Wyo., offices.

* * *

H. H. Ragle, of Jackson, Mich., executive president of the Michigan Independent Oil Men's Association, was a visitor to Tulsa last week.

* * *

C. L. Coppage, vice president of The Texas Company and director of sales, recently resigned after 20 years active connection with the oil industry.

* * *

W. E. Harrison, of the Richfield Oil Company, has been appointed superintendent of the northern division replacing Fred Abels, who recently resigned.

* * *

Dr. L. Edeleanu, the inventor of the Edeleanu process of oil refining, has returned from the United States to Europe on account of ill health.

* * *

David P. Hervey, formerly with the T. B. Slick interests, has been placed in charge of the Wichita, Kans., office of the Producers & Refiners Corporation.

* * *

Mr. and Mrs. A. G. Dana, of Parco, were in Casper, Wyo., recently. Mr. Dana is vice president and general manager of the Prairie Oil & Gas Company of Wyoming.

* * *

Ralph Espach, of Bartlesville, Okla., engineer of the United States Bureau of Mines, is working in the Eastern fields on problems of extracting wax from crude oil.

* * *

Miss Mildred Armstrong, of Oakville, Ontario, has left for Cartagena, Colombia, where she will join the nursing staff of the International Petroleum Company.

* * *

R. Ogarrio, New York City, vice president of The Texas Company, in charge of production, spent several days at the Houston, Tex., offices of the company during the week.

* * *

W. A. Raymond, formerly general manager of the Houston Gas & Fuel Company, has accepted a position as chief clerk to the city manager under the new Houston city government.

* * *

Mr. and Mrs. J. L. Stauft and son are returning to Petrolia, Ontario, on three months' furlough from Peru, where Mr. Stauft is connected with the International Petroleum Company.

* * *

B. R. Emrick, general superintendent for the Burmah Oil Company, Ltd., is on vacation in the United States, where he is to visit all the oil fields before returning to Burma.

* * *

W. Howard Pape is once more a resident of Tulsa. Mr. Pape has been in New York for the Crane Company and has been transferred to the same company's Tulsa headquarters.

* * *

L. M. Kiplinger, cashier for Ohio Oil Company in the Rocky Mountain region, and John D. Beardsley, traveling auditor for the company with headquarters at Findlay, Ohio, have been visiting Shelby, Mont.

* * *

Edwin A. Reckefus, formerly connected with the John J. Griffin Meter Company, Philadelphia, Pa., has been made superintendent of the meter shop of the United Gas Engineering Corporation, engineering subsidiary of the United Gas Company, Houston, Tex.

M. T. Rathvon, of Casper, Wyo., superintendent of operations for the Argo Oil Company, is visiting in Montana.

* * *

Hugh C. Ritchie, city engineer of Medicine Hat, was recently appointed superintendent of the municipal natural gas system.

* * *

W. H. Lovsey, in the land department of the Utah Oil Refining Company with headquarters in Salt Lake City, was in Casper, Wyo., in conference with officials of the Texas Production Company.

* * *

Lee A. Adams, a veteran oil scout of the Mid-Continent, and for a long time with the Carter Oil Company in the Ponca City district, is now field assistant for Ray M. Collins, Seminole Field umpire.

* * *

C. S. Sanders, assistant superintendent in the production department of the Midwest Refining Company, in charge of equipment, is convalescent at the hospital in Salt Creek, Wyo., from an operation for appendicitis.

* * *

Roy M. Johnson, of Ardmore, Okla., was a business visitor in Tulsa the past week. Mr. Johnson occupies a position in the petroleum hall of fame because of his prominent part in the opening of the great Healdton Field.

* * *

E. DeGolyer, president of Rycade Oil Corporation and chairman of the board of the Amerada Petroleum Corporation, with headquarters in New York, spent several days in Houston, Tex., at offices of the Rycade Oil Corporation.

* * *

Capt. Ward Townsend, of the shore staff of General Petroleum Corporation at Wilmington, Calif., was united in marriage recently to Miss Ann Gilbert of Oakland. After a honeymoon trip north they will make their home in San Pedro.

* * *

Maj. Sir Richard Barnett, M.P., chairman of the British Controlled Oilfields, Ltd., C. Dalley, director of British Controlled, and George H. Coxon, of the Anglo-Persian Oil Company, Ltd., recently returned to England from the United States.

* * *

Frank Cosan, who has been with the Independent Oil & Gas Company for years, has been made assistant superintendent of production succeeding George H. Myers, resigned. Mr. Myers expects to go into the oil business as an independent producer.

* * *

G. L. Alexander has just been elected vice president of the Macmillan Petroleum Corporation in charge of finances. Until recently Mr. Alexander had been vice president of the California Bank and vice president and director of the California Group Corporation.

* * *

T. H. Sherman, a graduate of Stanford University and until recently associated with the Santa Barbara Oil Company, has just joined the staff of the Exeter Oil Company. He previously occupied the position of petroleum engineer with the Miley Exploration Company.

* * *

Robert McKeon, who has been acting general manager of the Italo Petroleum Corporation of America during the illness of A. G. Wilkes, general manager, has been appointed permanently to the position. Mr. McKeon, who has also been elected secretary, has offices in the Subway Terminal Building, Los Angeles.

* * *

Walter Miller, vice president in charge of manufacturing for the Marland Refining Company, Ponca City, Okla. has been visiting the refinery of the Prudential Oil Corporation located at Baltimore, Md. The Marland company recently acquired control of the Prudential corporation and is now operating the refinery.

* * *

Ernest B. Tracey, New York City, president of the Louisiana Land & Exploration Company, H. H. Timkin, Canton, Ohio, director of the company and also head of the Timken Roller Bearing Company, headed a party of other officials and stockholders who were in Houston, Tex., the past week following an inspection tour of the company's holdings in southern Louisiana.

WILDCAT OPERATIONS IN KANSAS

(Continued from Page 44)

British American Oil Co.'s No. 1 McCarty, NE cor. NW Sec. 31-25-17w ..... Drlg. 4,525-45 ft.; 5,000,000 ft. gas showing 10 to 15 bbls. day; testing.

GEARY COUNTY

Wright et al's No. 1 Younker, NW cor. NE Sec. 17-11-5... Drlg. 2,150 ft.

GRAHAM COUNTY

Gulf Coast Oil Co.'s No. 1 Johnson, C S half Sec. 27-8-25w ..... Shut down 3,450 ft.

GREENWOOD COUNTY

P. H. Ballieu's No. 1 Bright, NE cor. SW Sec. 22-27-12e.. Hole full water 1,981 ft.; shut down 2,000 ft.

HARPER COUNTY

Amerada Pet. Corp.'s No. 1 Mendiville, C E SE Sec. 24-34-6w ..... Old total depth 5,360 ft.; plugged back to 4,000 ft.; drlg. 4,990 ft.

Independent & Reserve Oil Co.'s No. 1 Moulds, C NE Sec. 7-24-1w ..... Drlg. 180 ft.

HARVEY COUNTY

McCulloch et al's No. 1 Prouty, NW cor. SW Sec. 3-23-1w ..... Rig.

Roth & Parrent's No. 1 Brombrowsky, NW cor. Sec. 26-22-1e ..... Shut down 700 ft.

Empire G. & F. Co.'s No. 1 Tangeman, SW cor. NE NE Sec. 19-22-1e ..... Drlg. 3,511 ft.

Mrs. Gay et al's No. 1 Grove, C NW NE NW Sec. 29-23-1w ..... Drlg. 2,130 ft.

Slick & Corinell's No. 1 Gatz, NW cor. SE Sec. 36-22-1e.. Drlg. 1,945 ft.

Hartman & Skaer's No. 1 Seaman, NW cor. NE SE Sec. 26-24-1e ..... Drlg. 3,005 ft.

Helmerich & Payne's No. 1 Lindamond, C SW NE SW Sec. 2-22-1e ..... Drlg. 3,385 ft.

Fisher & Louch et al's No. 1 Reiger, NW cor. NE Sec. 17-23-2 ..... Fishing 2,980 ft.

Jolly & Ogg's No. 1 Randall, NE cor. NE Sec. 11-24-1w.... Drlg. 3,250 ft.

Patton et al's No. 1 Dunning, SE cor. SW NE Sec. 26-24-1.. Drlg. 2,265 ft.

Rosenthal et al's No. 1 Ingalls, C NW SW Sec. 24-23-3w.. Shut down 1,405 ft.

Jolly & Ogg's No. 1 Hupp, SE cor. NE Sec. 22-23-1w.... Drlg. 2,095 ft.

JEFFERSON COUNTY

Wichita Oil Co.'s No. 1 Simpson, NW cor. SW SW Sec. 19-10-17 ..... Rigged up and shut down.

JACKSON COUNTY

Garvin & Morton's No. 1 Lutes, SW cor. NW NW Sec. 27-7-15 ..... Abandoned 2,510 ft.

KINGMAN COUNTY

Gypsy Oil Co.'s No. 1 Kincaid, NE cor. NW, Sec. 18-29-5w ..... Rig.

LANE COUNTY

Robinson's No. 1 Dickerson, Sec. 11-18-27w ..... Shut down 2,650 ft.

Blankenship Pet. Co.'s No. 1 Schaeffer, NE cor. NE Sec. 24-16-28w ..... Spudded and shut down.

MARSHALL COUNTY

Irwin et al's No. 1 Cooper, NE NW Sec. 10-3-7e..... Drlg. 1,320 ft.

Empire O. & R. Co.'s No. 1 Scally, SW NE NE Sec. 28-19-2e ..... Drlg. 1,860 ft.

MARION COUNTY

T. C. Johnson's No. 1 Doltweiler, SW cor. NE NW Sec. 3-18-4e ..... Drlg. 1,950 ft.

Hartman & Skaer and White Eagle's No. 1 Kline, NE NW Sec. 28-18-3e ..... Drlg. 2,660 ft.

Connell & Prairie's No. 1 Zirak, SE cor. SW Sec. 3-18-3e ..... Drlg. 2,340 ft.

General Utilities Co.'s No. 1 Burkholder, Sec. 18-19-3e... Drlg. 2,391 ft.

General Utilities Co.'s No. 1 Propp, NE cor. SE SW Sec. 8-19-4e ..... Rig.

Helmerich & Payne's No. 1 Rosen, NE cor. SE SW Sec. 25-21-2w ..... Drlg. 1,375 ft.

J. E. Hauna's No. 1 Pankratz, NE cor. NE SW Sec. 13-20-3 ..... Rig.

A. E. Meyers' No. 1 Papp, SW cor. SW NE Sec. 10-18-2.. Shut down 2,755 ft.

Frank L. Moore's No. 1 Miller, NE cor. NE Sec. 26-19-1.. Drlg. 2,155 ft.

McPHERSON COUNTY

McPherson Gas Co.'s No. 1 Chinberg, NW cor. Sec. 18-19-2w ..... Location.

McPherson O. & G. Co.'s No. 1 Rasmusson, SW cor. Sec. 8-18-3w ..... Spudding; shut down.

Ted Washabaugh's No. 1 Voshell, NE cor. NE Sec. 9-21-3w ..... Fishing 3,301-04 ft.; show of oil.

McPherson Gas Co.'s No. 1 Reitz, NW cor. SE SW Sec. 1-20-2w ..... Drlg. 1,547 ft.

Lariaux et al's No. 1 Martinson, NE cor. Sec. 9-19-3w... Rig; abandoned.

J. H. Tatlock's No. 1 Hayer, C SW NE Sec. 32-20-1w.... Drlg. 1,520 ft.

Marland Prod. Co.'s No. 1 Wilkering, C SW SW Sec. 9-21-1w ..... Underreaming 3,535 ft.

MORRIS COUNTY

Hiatt et al's No. 1 Blythe, NW NE Sec. 35-15-5e..... Drlg. 1,750 ft.

NESS COUNTY

Barnsdall Oil Co.'s No. 1 Lauk, C SW Sec. 35-18-21w..... Drlg. 4,177-80 ft.; show gas and oil.

NORTON COUNTY

Southwestern Petroleum Co.'s No. 1 Montague, NE SW SW Sec. 28-1-22w ..... Shut down 1,480 ft.

OSBORNE COUNTY

Mid-Kansas' No. 1 Boyce, SE cor. NW Sec. 18-6-13w.... Spudding.

Empire O. & R. Co.'s No. 1 Crest, SE NE Sec. 30-9-14w ..... Drlg. 3,305 ft.

Trees Oil Co.'s No. 1 Payenter, NE cor. SE SE Sec. 22-8-15w ..... Shut down 650 ft.

S. D. Jarvis' No. 1 Jellison, SE cor. SE Sec. 13-10-15w.. Drlg. 3,200 ft.

OTTAWA COUNTY

Anderson et al's No. 1 Bank, NE cor. NW Sec. 28-10-2w.. Drlg. 3,610 ft.

PAWNEE COUNTY

F. C. Troupe's No. 1 Lovett, CEL NE NE Sec. 31-21-16w.. Shut down 1,560 ft.

PHILLIPS COUNTY

Watsonian-British American's No. 1 Neilman, C SW SW Sec. 34-2-19w ..... Shut down 1,847 ft.

Watsonia Oil Co.'s No. 1 Marklein, NE cor. SW Sec. 21-3-19w ..... Drlg. 4,040 ft.

PRATT COUNTY

O'Haver & Jones' No. 1 Lunt, C SW NW Sec. 15-28-14w.. Shut down 840 ft.

Empire O. & R. Co.'s No. 1 Henderson, SW cor. Sec. 35-25-4w ..... Drlg. 2,105 ft.

RENO COUNTY

Perry et al's No. 1 Oswald, NE cor. NE SE Sec. 30-22-5w ..... Drlg. 2,790 ft.

Milmar Oil Co.'s No. 1 Strickley, SW cor. SW Sec. 17-26-5w ..... Drlg. 2,550 ft.

RICE COUNTY

Allison & Fitzwilliams' No. 1 Poland, NE cor. SW NE Sec. 26-19-8w ..... Cellar.

Higgins & Stembubble's No. 1 Shurr, NE cor. SW Sec. 21-20-10w ..... Underreaming casing total depth 1,900 ft.

RILEY COUNTY

Derby & Shaw's No. 1 Lindstrom, NE cor. Sec. 32-7-5e.. Rig.

RUSSELL COUNTY

Allison & Fitzwilliams' No. 1 Mohenny, NW SE Sec. 5-14-12w ..... Drlg. 488 ft.

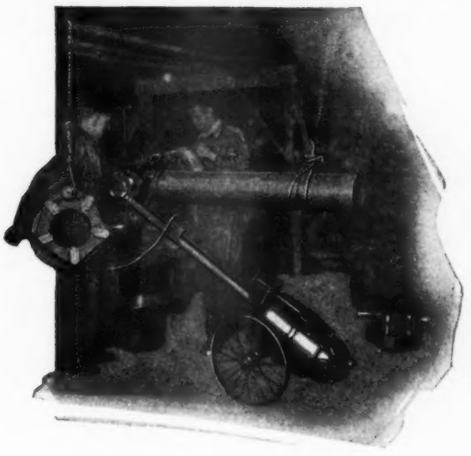
Phillips Pet. Co.'s No. 1 Salback, SE NW Sec. 32-12-14w ..... Drlg. 500 ft.

T. B. Slick's No. 1 Lellaus, SW cor. NE Sec. 36-15-13w.. Drlg. 2,100 ft.

BOOKS COUNTY

Burford-Brim's No. 1 Toxa, Sec. 22-9-17w ..... Spudded; shut down.

Prairie O. & G. Co.'s No. 1 Gick, SE cor. Sec. 22-9-19w.. Drlg. 3,150 ft.



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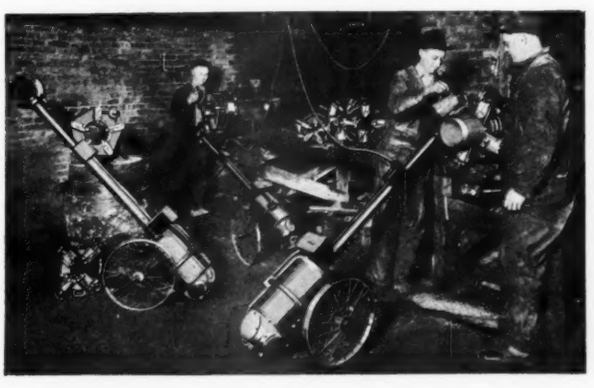

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DETROIT

Prairie O. & G. Co.'s No. 1 Sandberg, C SW Sec. 20-9-18w ..... Drlg. 3,610 ft.

RUSH COUNTY

Sinclair Oil & Gas Co.'s No. 1 Sims, C SW NW NW Sec. 8-18-17w ..... Drlg. 510 ft.
Danciger Oil Ref. Co.'s No. 1 Swindt, SW cor. Sec. 22-17-17w ..... Drlg. 1,170 ft.
Barnsdall Oil Co.'s No. 1 Brock, C SE SE Sec. 21-17-17w ..... Drlg. 1,175 ft.
Central Commercial Oil Co.'s No. 1 Brock, SE cor. SW SW Sec. 12-17-16w ..... Shut down 50 ft.
Phillips Pet. Co.'s No. 1 Legleiter, NE cor. NW SE Sec. 10-16-18w ..... Drlg. 3,640 ft.
Danciger Oil Ref. Co.'s No. 1 Poland, NE cor. SW NE Sec. 17-19-17w ..... Drlg. 2,595 ft.
Wilcox Oil & Gas Co.'s No. 1 Schwartzkopf, NE cor. NW SW Sec. 27-17-17w ..... Drlg. 2,485 ft.
Wilcox O. & G. Co.'s No. 1 Woodward, NE cor. NE Sec. 35-27-17w ..... Drlg. 2,162 ft.

SALINE COUNTY

Dixie Oil Co.'s No. 1 Main, C SW SE Sec. 6-15-2w.... Drlg. 1,260 ft.
Kinney-Coastal Co.'s No. 1 Hughes, NE cor. Sec. 20-13-4w. Shut down.
M. Estey et al's No. 1 Peterson, C NE Sec. 6-16-5w ..... Spudded and shut down.
Boyle et al's No. 1 Miller, SW cor. SE Sec. 21-16-1w..... Shut down 2,615 ft.
Nathan Jones et al's No. 1 Robertson, NW cor. SW Sec. 27-14-2w ..... T.D. 3,587 ft.; P.B. shot 60 qts. 3-315-46 ft.; no show.
Kenney Coastal Oil Co.'s No. 1 Beal, C NW Sec. 23-14-5w ..... Drlg. 2,650 ft.

SEDGWICK COUNTY

Johnson & Marshall's No. 1 Roy, NE cor. SE SW Sec. 23-29-1w ..... Rig.
T. B. Slick's No. 1 Rosenhagen, SW SE NE Sec. 33-27-4w ..... Drlg. 2,545 ft.
Hammond & Stout's No. 1 Roeder, SW NW Sec. 23-27-2w ..... Spudding 515 ft.
Twist et al's No. 1 Armstrong, NE NW Sec. 28-26-1e.... Rig spudding; shut down.
White Eagle's No. 1 Robbins, NE cor. SE Sec. 20-28-1e.. Rigging.
Shawver et al's No. 1 Scott, SE cor. SW SW Sec. 10-28-1e ..... Spudding.
Barnett O. & G. Co.'s No. 1 Davidson, NW cor. NW SW Sec. 27-26-1e ..... Rig; spud; shut down.
Lewis et al's No. 1 Taylor, NW cor. NE Sec. 23-27-2..... Drlg. 3,202 ft.
Kyser et al's No. 1 Stroot, SW cor. NW Sec. 8-26-2w..... Drlg. 3,989 ft.
Lario & Blair's No. 1 Tjaden, C NE SE Sec. 22-29-2w.... Drlg. 3,225 ft.
R. Maglason et al's No. 1 Buckles, NW cor. SE Sec. 3-28-1w ..... Shut down 350 ft.
Magnolia Pet. Co.'s No. 1 Wise, NW cor. NW Sec. 36-28-2w ..... Drlg. 3,110 ft.
Blankenship et al's No. 1 Tuttle, SW cor. NW Sec. 1-27-1 ..... Drlg. 2,705 ft.
Washabaugh et al's No. 1 Harrison, NW cor. NE NE Sec. 3-26-2w ..... Shut down 350 ft.
Morgan & Tilley's No. 1 Fitzgerald, NW cor. NE Sec. 5-26-1w ..... Shut down 800 ft.
Twist et al's No. 1 Joseph, CNL SW SE Sec. 4-25-1w..... Drlg. 1,650 ft.
Connell & Slick's No. 1 Cross, NE Cor. Sec. 27-25-1w.. Plugging back to 2,730 ft.; shot 20 qts. 2,690-2,730 ft.; pumping 12 bbls.; completed.
Miller Wentz' No. 1 Shaffer, NW cor. NE Sec. 9-27-2w.... Shut down 2,095 ft.
Kroder et al's No. 1 Harden, SW cor. NW SW Sec. 20-26-1e ..... Shut down 1,100 ft.
Morgan et al's No. 1 Corn, SW cor. NE Sec. 28-26-1w.. Shut down 3,320 ft.
Shell Pet. Corp.'s No. 1 Lygrisse, SE cor. NE Sec. 15-26-2e ..... Simpson 3,164-73 ft.; 1,600 bbls.
Washabaugh et al's No. 1 Harrison, NW cor. NE NE Sec. 3-26-2w ..... Shut down 350 ft.
Sullivan et al's No. 1 Shelly, NW cor. NE SE Sec. 32-29-2e ..... Drlg. 2,925 ft.
Hartman & Skaer et al's No. 1 Hutchinson, SE cor. SE SW Sec. 23-28-3w ..... Drlg. 3,265 ft.
J. H. Tatlock's No. 1 Cook, SW cor. SW Sec. 25-28-2.... Drlg. 3,222-87 ft.
Producers Oil Co.'s No. 1 Jones, SW cor. NE SE Sec. 31-26-2 ..... Drlg. 2,685 ft.
Jones & Kirk's No. 1 Sheppard, SE cor. NE Sec. 4-25-1.... Drlg. 3,165 ft.
LaFont et al's No. 1 Carlton, C SE SE SW Sec. 24-28-1e.. Shut down 870 ft.
T. B. Slick's No. 1 Rosenhagen, C SW SE NE Sec. 33-27-4w ..... Drlg. 2,545 ft.
Frank Wahn's No. 1 Wilson, C NE NW SE Sec. 9-26-1w.. Rig and tools.
Palten & Wentz' No. 1 Swanson, NW cor. NE Sec. 6-26-2e. Hole full oil 3,005-10 ft.; will test.
Connell & Slick's No. 1 Mohannah, C NE SE SE Sec. 3-25-1w ..... Drlg. 2,585 ft.
Reynolds & Rogers' No. 1 Updegraft, C SE SW SE Sec. 26-25-1w ..... Rig.
Jones & Kirk's No. 1 Sheppard, SE cor. NE Sec. 4-25-1e.. Drlg. 3,165 ft.

SHERMAN COUNTY

A. L. Henson et al's No. 1 Murry, NE cor. SE NW Sec. 22-7-40w ..... Shut down 3,085 ft.

STEVENS COUNTY

Trees Oil Co.'s No. 1 Thompson, C NE SW Sec. 3-35-38w.. Shut down 500 ft.
W. Sidwell et al's No. 1 Kelly, SW cor. NE Sec. 16-34-38w ..... Shut down 1,320 ft.

SMITH COUNTY

Mid-Kansas Oil & Gas Co.'s No. 1 Unknown, NE cor. NE Sec. 4-2-13w ..... Fishing tools 3,565 ft.

SUMNER COUNTY

Gypsy & Blankenship's No. 1 Robeck, C SW SW Sec. 27-34-4w ..... Rig on ground.
Gypsy Oil Co.'s No. 1 Williams, NW SE SW Sec. 16-35-3w ..... Wilcox 4,768-82 ft.; averaging 375 bbls.; pinched in.
Davidson et al's No. 1 Strickland, SW cor. SE Sec. 12-35-1w ..... Rig.

TREGO COUNTY

Central Commercial Oil Co.'s No. 1 Ellis, NE cor. SW NE Sec. 20-13-21w ..... Shut down 3,955 ft.

WASHINGTON COUNTY

McCool & Vincent's No. 1 Linn, NW cor. NE Sec. 27-4-3.. Rig.

WALLACE COUNTY

Morton & Entyre's No. 1 Parker, SE cor. NW SW Sec. 20-13-41w ..... Rig.

WILDCAT OPERATIONS IN OKLAHOMA

(Continued from Page 42)

GARFIELD COUNTY

E. L. Love and others' No. 1 White, SE cor. NW Sec. 9-24-6w ..... Underreaming 4,755 ft.

GRADY COUNTY

J. V. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w.. Spudded and shut down.
J. M. Henry and others' No. 1 Abraham, SE cor. NW Sec. 4-5-8w ..... Rig.

GRANT COUNTY

Cowden and others' No. 2 Vollmer, CEL NE SW Sec. 22-25-4w ..... Shut down 5,640 ft.
Lario-Lathrop's No. 1 Cornell, NW cor. NW Sec. 24-28-3w ..... Drlg. 4,605 ft.

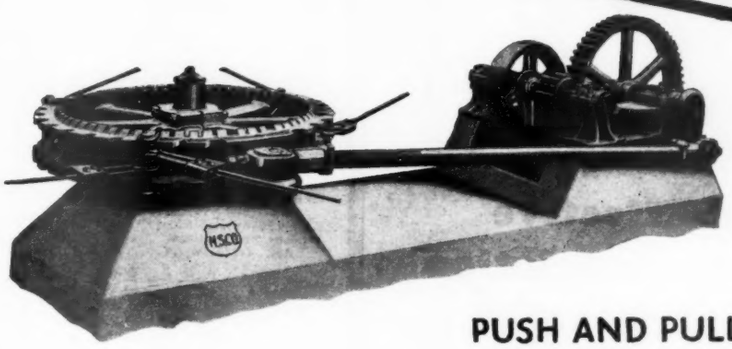
GARVIN COUNTY

Smythe and others' No. 1 Shaw, NE cor. NE Sec. 27-2-3w ..... Rig.
Gilcrease Oil Co.'s No. 1 Kelly, SE cor. NW NE Sec. 36-3-3w ..... Drlg. 3,950 ft.

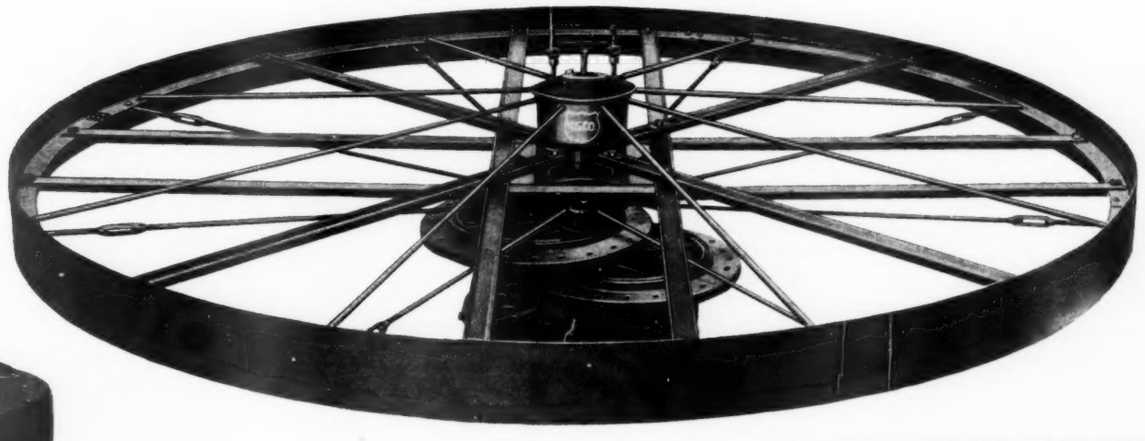
GREER COUNTY

I. T. I. O. and others' No. 1 fee, C SW NE Sec. 17-6-24w ..... Drlg. 1,137 ft.

POWERS



PUSH AND PULL



No. 12 C BAND WHEEL

IN THE MID-CONTINENT AND SOUTHWESTERN FIELDS, NATIONAL ENGINEERS ARE PREPARED TO ESTIMATE ON, AND CONSTRUCT COMPLETE TURN-KEY (*READY-TO-RUN*) INSTALLATIONS.

E

L SUPPLY

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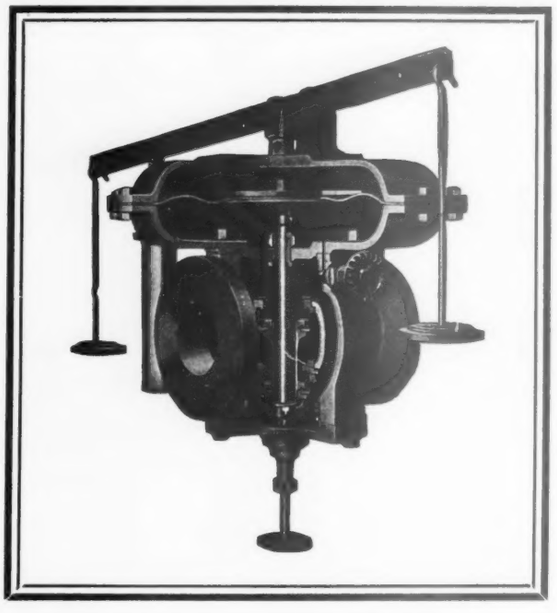

The Most Effective Gas Pressure Regulation

THE Davis Improved Gas Pressure Regulator accurately handles reductions in pressure anywhere from 250 pounds down to any desired service pressure.

Add to this range the advantages of tightness in service, infrequent but easy maintenance, and simple installation, and you'll find that this regulator is the most effective means of controlling gas pressure.

The double-seated balance disc seats against a soft leather or oil-proof rubber ring, keeping the regulator absolutely tight when closed. The entire valve and cage assembly can be replaced easily and quickly as a unit in the field, and the seat rings are easily replaced without disturbing other parts. The regulator needs no outside piping in putting it on the line, making it the simplest type of installation.

The Davis Gas Pressure Regulator is made in a full range of sizes to suit all needs. Our engineers will be glad to help you plan an efficient layout.

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WESTCOTT & GREIS, Inc.
Sales Engineers:
TULSA LOS ANGELES DALLAS

Automatic valve makers for over fifty years

DAVIS VALVE SPECIALTIES

O&GJ 5-16 Gray

S. M. Stauffer's No. 1 Castleman, SW NE Sec. 8-4-26w..Rig.

HARMON COUNTY

I. T. I. O. Co.'s No. 1 fee, C SW SE Sec. 17-5-24w..Rig.

HARPER COUNTY

Hoffer Oil Co.'s No. 1 Cooper, NW cor. SE SE Sec. 12-25-22w .....Shut down 4,130 ft.

HUGHES COUNTY

Whitney et al's No. 1 Moore, SE SW Sec. 17-5-9 .....Drlg. 3,730 ft.
McGee Co.'s No. 1 fee, SE cor. Sec. 25-8-11e .....Rig.
The Texas Company's No. 1 Bryan, SE NE SW Sec. 9-6-8e .....Spudding.

JACKSON COUNTY

Altus Oil Co.'s No. 1 Northington, NE cor. NE Sec. 4-1-20w .....Shut down 2,020 ft.

KAY COUNTY

Wentz Oil Corp.'s No. 1-A Ward, C NE SE SW Sec. 32-27-1e .....Water 3,972-4,029 ft.; total depth 4,095 ft.; abandoned.

KINGFISHER COUNTY

McKenna & Crawford's No. 1 Sturgeon, NE cor. SW Sec. 27-16-6w .....Shut down 4,895 ft.

KIOWA COUNTY

S. H. Christian's No. 1 Stone, SE cor. Sec. 18-7-18w..Rig on ground.
C. B. Cloyes' No. 1 Brazill, SW cor. NE Sec. 34-7-17w..Plugging back to 918 ft.
Merrick Oil Co.'s No. 1 Kelly, NW cor. SE Sec. 20-7-17w..Shut down 1,035 ft.
McWharter and others' No. 1 Sherwood, CWL NW NE Sec. 2-5-17w .....Drlg. 570 ft.

LATTIMER COUNTY

Limestone O. & G. Co.'s No. 1 Shaw, NW cor. NE NW Sec. 23-5-18e .....Rig on ground.
Limestone Oil & Gas Co.'s No. 1 McMurray, SW cor. SW Sec. 15-5-18 .....Underreaming 6-in. csg. 3,520 ft.

LINCOLN COUNTY

Phillips Pet. Co.'s No. 1 Stephens, SE cor. NW Sec. 29-12-3 .....Rig.
Morgan & Flynn's No. 1 Finlay, SW cor. SW Sec. 19-16-6 .....Drlg. 1,104 ft.
Wheeler & Mote's No. 1 Kemmer, NW cor. NE SW Sec. 2-16-5 .....Drlg. 3,800 ft.

LOGAN COUNTY

Haley & Smith's No. 1 Guier, SE cor. SW Sec. 33-18-3w..Cleaning out 5-in. csg. 3,970 ft.

McCLAIN COUNTY

Tidal Oil Co.'s No. 1 Davis, C SE SE Sec. 31-5-2e..Water 4,284-90 ft.; shut down.

McINTOSH COUNTY

Spring Valley Oil Co.'s No. 1 Carr, SE cor. NE NW Sec. 16-10-13e .....Drlg. 200 ft.
Patterson and others' No. 1 Smith, SW cor. NW SE Sec. 32-9-16 .....Drlg. 492 ft.
Wolfe and others' No. 1 Unknown, NW cor. SE Sec. 15-12-18 .....Rig on ground.

MAJOR COUNTY

Randau & Mooney's No. 1 Parker, SE cor. NE NW Sec. 4-23-16w .....Show oil 1,235 ft.; shut down.
Earl and others' No. 1 Turner, C NE NE Sec. 23-20-14w..Rig.
Wilson and others' No. 1 Unknown, NE cor. NE Sec. 4-23-16w .....Shut down 510 ft.

MUSKOGEE COUNTY

Tulkogee Oil Co.'s No. 1 Thompson, NW NE Sec. 31-15-20e .....Machine.
Slusher's No. 1 Barnes, NE cor. Sec. 22-13-19e .....Machine.
J. L. Slusher's No. 1 Nave, NE cor. SW NW Sec. 20-15-20 .....Shut down 775 ft.

OKFUSKEE COUNTY

Superior and others' No. 1 Carolina, SE cor. Sec. 6-11-7e .....Location.
T. B. Slick Inc.'s No. 1 Berry, SE cor. NE SE Sec. 21-11-7 .....Water 4,718-23 ft.; hole full water, shut down.
Erwin and others' No. 1 Patterson, NW cor. SE Sec. 15-13-9 .....Location.
Prairie O. & G. Co.'s No. 1 Palmer, NW cor. NW NE Sec. 2-11-9 .....Drlg. 3,560 ft.

OKLAHOMA COUNTY

Mid-Kansas' No. 1 Trosper, NE NW Sec. 19-12-1w..Drlg. 685 ft.
Slick & Bailey's No. 1 Koester, C SE NE Sec. 18-13-3w..Shut down 6,130 ft.
Cromwell & Franklin's No. 1 Thompson, SW cor. NE NE Sec. 15-12-3w .....Granite 7,167-7,180 ft.; fishing.
Hall & Briscoe's No. 1 Holmes, NE cor. SW SE Sec. 10-11-5w .....Shut down 4,750 ft.

PITTSBURG COUNTY

Kerr & Koy's No. 1 Hall, C NW NW Sec. 32-4-12..Fishing 1,800 ft.

POTTAWATOMIE COUNTY

T. B. Slick's No. 1 Sailor, SE cor. NW NW Sec. 12-8-3..Hole full water 5,441 ft.; abandoned.
Simms Oil Co.'s No. 1 Lester, SE cor. NE NE Sec. 19-6-4 .....Total depth 3,699 ft.; 3,105 bbls.; completed.

ROGER MILLS COUNTY

Bucy & Stone's No. 1 William, C SW Sec. 23-12-24w..Location.

SEMINOLE COUNTY

Indian Territory Illuminating Oil Co.'s No. 1 Peterson, SE SW NW Sec. 24-7-5e .....Fishing 4,270 ft.
Indian Territory Illuminating Oil Co.'s No. 1 Factor, SW NE SE Sec. 3-5-7e .....Drlg. 1,650 ft.
Continental Oil Co.'s No. 1 Proctor, SE cor. NE NE Sec. 5-8-8e .....Drlg. 2,957 ft.
Gypsy Oil Co.'s No. 1 Andrews, NE SE NW Sec. 27-10-7 .....Water 4,635-48 ft.; hole full water; abandoned.
McCulloch Oil Co.'s No. 1 McGilbray, SW cor. SW NE Sec. 4-8-8 .....Drlg. 4,120 ft.
McCulloch Oil Co.'s No. 1 Powell, NW cor. NW Sec. 11-6-5 .....Drlg. 2,475 ft.
Marland Oil Co.'s No. 1 Strothers, NW cor. SE NE Sec. 5-10-7 .....Wilcox 4,925-42 ft.; hole full water; P.B. to 4,595 ft. to list.; shot 60 qts.; no show; abandoned.
Magnolia Pet. Co.'s No. 1 Harjo, NE cor. SE Sec. 34-6-7..Drlg. 4,360 ft.
Prairie O. & G. Co. and others' No. 1 Davis, NE cor. NE Sec. 26-6-6 .....Drlg. 4,515 ft.

SEQUOYAH COUNTY

Cooper & Badger's No. 1 Young, NW cor. NE NE Sec. 7-12-20 .....Shut down 50 ft.
Hunt and others' No. 1 Unknown, SE cor. NW SW Sec. 12-12-23 .....Shut down 1,105 ft.
Buffington and others' No. 1 Melcher, C SW NW Sec. 31-12-24 .....Shut down 3,000 ft.

WOODS COUNTY

E. K. Miller's No. 1 Copenhavers, NW cor. NW Sec. 18-24-13w .....Rigged up and shut down.
Gypsy-Prairie and others' No. 1 Thompson, SE cor. SW Sec. 10-25-15w .....Drlg. 5,030 ft.
Sinclair Oil & Gas Co.'s No. 1 Showalter, C SW SW Sec. 33-27-16w .....Drlg. 289 ft.

WOODWARD COUNTY

Farrond et al's No. 1 Unknown, SE cor. SW SE Sec. 22-23-17w .....Drlg. 1,100 ft.
Sharon Oil Co.'s No. 1 Elmore, SW cor. SW Sec. 25-21-21w .....Rig blown down 3,025 ft.; abandoned.
Prairie Oil & Gas Co. and others' No. 1 James, NE cor. NW Sec. 23-23-17w .....Drlg. 3,480 ft.
Billy's Oil Co.'s No. 1 Watt, C SE Sec. 9-23-20w..Shut down 3,612 ft.
Burgoyne Brothers' No. 1 Merkins, SW cor. SE NE Sec. 15-21-19w .....Shut down 1,910 ft.
Wilson and others' No. 1 Unknown, NE cor. SW Sec. 4-23-16w .....Shut down 510 ft.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Wapanucka Oil Co.'s No. 1 Banks, CWL SE SE Sec. 28-2s-9 ..... Shut down 1,530 ft.

BRYAN COUNTY

Yale Oil Syndicate's No. 1 Craige, C NW NE Sec. 36-9s-9e ..... Fishing bit 1,390 ft.

CARTER COUNTY

L. J. Woodruff's No. 1 Zellnear, NE cor. NW SE Sec. 34-4s-1 ..... Machine.
Avon-Dickey's No. 1 Anderson, NE cor. SE NE SE Sec. 32-4s-2 ..... Shut down 420 ft.

CHOCTAW COUNTY

Choctaw Petroleum Co.'s No. 1 Wilson, SW cor. SW Sec. 15-6-19 ..... Shut down 1,346 ft.

COTTON COUNTY

Everetts and others' No. 1 Hall, SE NW Sec. 36-4-13w.. Abandoned 2,700 ft.
Kirbow and others' No. 1 Brown, NE SW Sec. 35-3-12w.. Drlg. 1,170 ft.
Perkins & Callum's No. 1 Tucker, NW NE Sec. 11-3-10w ..... Shut down 2,513 ft.
Pewlin Pet. Co.'s No. 1 King, SW SE Sec. 22-3-9w.. Shut down 520 ft.
Amerada Pet. Corp.'s No. 1 Dulaney, SE cor. NW NW Sec. 31-4-9w ..... Drlg. 1,697 ft.
Consolidated Oil Co.'s No. 1 Indian Land, NE SW Sec. 11-3-12w ..... Abandoned 2,502 ft.
Pierce & Brown's No. 1 Hertzler, NW cor. NW Sec. 31-2-12w ..... Shut down 2,716 ft.
Shasta Oil Co.'s No. 1 Pah-pe-chi, NE cor. NE Sec. 34-1s-11w ..... Abandoned 2,602 ft.
White and others' No. 1 Woodruff, NW NE SE Sec. 18-3-11w ..... Shut down 2,500 ft.

JEFFERSON COUNTY

Alter and others' No. 1 Johnson, SW cor. NW Sec. 14-4-7.. Spudded and shut down 350 ft.
Pierce & Brown's No. 1 School Land, SE NE NW Sec. 16-5-8w ..... Location.

JOHNSTON COUNTY

Humble O. & R. Co.'s No. 1 Colbert, Sec. 6-4s-4e, SE SW.. Drlg. 1,100 ft.
Smith & Knisely's No. 1 Lane, E half Sec. 29-1-7.. Shut down 1,900 ft.
Bush Creek Oil Co.'s No. 1 Kirby, SE cor. NE NW Sec. 9-4-7 ..... Shut down for casing 405 ft.

MARSHALL COUNTY

Neff and others' No. 1 Strothers, C SW NE NE ..... Drlg. 623 ft.

MURRAY COUNTY

Bison Oil Co.'s No. 1 Labor, NW cor. Sec. 17-1-2e.. 500,000 ft. gas and show of oil 2,185-2,228 ft.; drlg. 2,267 ft.

STEPHENS COUNTY

Heydrick Drlg. Co.'s No. 1 Thompson, CWL SE NE Sec. 1-1-8w ..... Drlg. 300 ft.
Haynes et al's No. 1 Woolsey, SE cor. SW NE Sec. 4-3S-6w ..... Location.
Ellis Drilling Co.'s No. 1 Yates, SW NE Sec. 4-3-7w.. Rig.

TILLMAN COUNTY

Long & Taylor's No. 1 Grooms, SE NW Sec. 10-1-17w .... Rig on ground.
Cochran & Ridgway's No. 1 Barnes, C NW NE..... Cellar.
Burt Lambert and others' No. 1 Zivlig, C NW Sec. 25-1-18w ..... Drlg. 2,232 ft.
Landfair and others' No. 1 Smith, SE SW SE Sec. 6-2s-15w ..... Shut down 2,535 ft.
Allen & Treadwell's No. 1 Howell, NW cor. SE Sec. 13-1-17w ..... Drlg. 785 ft.

OKLAHOMA PANHANDLE

Magnolia Pet. Co.'s No. 1 School, C SE NE Sec. 22-5-5.. Drlg. 3,315 ft.
Skaer's No. 1 Hitch, NW cor. Sec. 25-1-15e ..... Drlg. 100 ft.
Three Way Oil Co.'s No. 1 Cane, SW NW Sec. 11-1-18e.. Shut down 3,350 ft.

PRODUCTION 925,500,000 BBLS. IN 12 MONTHS ENDING APRIL 30

While production of the United States in March averaged 25,640 bbls. below the daily average production figure for February, it was 241,578 bbls. per day in excess of the production in March, 1928. The total production for March, 1929, was 82,169,369 bbls., while in the same month last year it was 74,680,709 bbls., a difference of 7,488,660 bbls.

The production of the United States for the 12 months ending March 31 was 918,773,259 bbls. It is estimated that the production for the 12 months ending April 30 will exceed 925,500,000 bbls. when the final figures are made available.

SUMMARY BY PRODUCING DIVISIONS

Crude Oil Production in the United States in March 1928

	Daily av. (bbls.)	Month (bbls.)
Oklahoma	672,202	20,838,262
California	784,669	24,324,729
Texas	785,759	24,358,592
Kansas	95,196	2,951,076
Arkansas	72,314	2,241,734
Louisiana	56,650	1,756,153
Montana	9,483	293,973
Wyoming	51,584	1,599,104
Colorado	6,875	213,125
New Mexico	2,891	89,621
Eastern fields	113,000	3,503,000
Total March	2,650,623	82,169,369
Total February	2,676,263	74,935,428
Difference	25,640	7,233,941

MID-CONTINENT FIELDS

	Daily av. (bbls.)	Month (bbls.)
Kansas	95,196	2,951,076
North Texas	89,055	2,760,705
Oklahoma	672,202	20,838,262
Central Texas	48,879	1,515,249
West Texas	374,487	11,609,104
Panhandle of Texas	59,523	1,845,213
East Central Texas	21,502	666,569
Arkansas	72,314	2,241,734
North Louisiana	35,806	1,109,986
Total March	1,468,964	45,537,898
Total February	1,502,135	42,059,775
Difference	32,171	3,478,123

GULF COAST AND SOUTHWEST TEXAS

	Daily av. (bbls.)	Month (bbls.)
Gulf Coast (Tex.-La.)	147,950	4,586,507
Southwest Texas	65,206	2,021,412
Total March	213,156	6,607,919
Total February	195,972	5,487,290
Difference	17,184	1,120,629

OKLAHOMA

Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
Washington County	5,515	170,965
Nowata County	5,487	170,097
Rogers County	1,934	59,954
Osage and eastern Kay Counties—		
Burbank	22,282	690,742
Osage, outside Burbank	25,573	792,763
Total	47,855	1,483,505
Tulsa and Wagoner Counties—		
Bird Creek, Owasso, etc.	3,658	113,398
Red Fork, Sand Springs Turkey Mt., Bruner	1,212	37,572
Bixby, Leonard	1,069	33,139
Broken Arrow, Coweta	1,043	32,333
Total	6,982	216,442
Okmulgee and Muskogee Counties—		
Okmulgee and Beggs	6,840	212,040
Mounds	1,774	54,994
Bald Hill and Haskell	2,954	91,574
Morris, Boynton, Cole	2,058	63,798
Total	13,626	422,406
Okmulgee, Okfuskee, Seminole and Pottawatomie Counties—		
Seminole City	32,556	1,009,236
Bowlegs	34,028	1,054,868
Little River	80,268	2,488,308
Earlsboro	56,659	1,756,429
Searight	9,892	306,652
Mission	30,519	946,089
Carr City	1,015	31,465
Maud	21,749	674,219
Total Seminole	266,686	8,267,266
Pearson-St. Louis	103,329	3,203,199
Henryetta, Deaner-Lyons, etc.	3,668	113,708
Wewoka	4,973	154,163
Cromwell	8,000	248,000
Papoose-Gilcrease	3,478	107,818
Jarvis-Holm	446	13,826
Weleetka	1,319	40,889
Wetumka	39	1,209
Yeager	293	9,083
Miscellaneous	3,304	102,424
Total	395,535	12,261,585

(Continued on Next Page)

VALVES PIPE FITTINGS FIRE HYDRANTS

KENNEDY

THERE'S a large factor of safety built into each Kennedy product. Besides designing for strength to withstand exceptional service conditions, every Kennedy Valve is tested to far more than the pressure for which it is guaranteed before being permitted to leave the factory. This is one of the many reasons why Kennedy Valves stand up in services that cause failure of other types, and why so many Kennedy Valves are still in use after a quarter century or more of service.

A suitable type and size of valve for every producing, refining and pipe line service is included in the extensive Kennedy line, and each Kennedy design has proven its effectiveness of control, economy of maintenance, and dependability of operation in petroleum industry installations.

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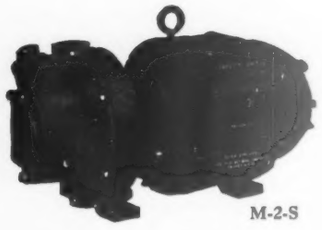
Beam from ONE No. 2375 Pyle-O-Lyte

BANISH dark corners and spotty light, give the night shift the nearest thing to daylight all over the plant and cut out accidents and delays, reduce fire hazard, get more work done, with Pyle-O-Lytes for Refinery Lighting.

Large capacity and heavy duty construction make The Pyle-National Type "M-2-S" unit ideal for modern requirements of rig lighting service. Safety switch and fuse box is standard equipment, making Type "M-2-S" a complete unit, easily installed and reliable in operation.

Send for Pyle-National bulletins describing Type "M-2-S".



M-2-S

The Pyle-National Company

General Offices and Works:

1334-1358 North Kostner Avenue, Chicago, Ill., U. S. A.

Direct Factory Representative

ALEX JOHNSON, 1000 Marine Bank Bldg., Houston, Tex.

O&GJ 5-16 Gray

Creek and Tulsa Counties—		
Glen Pool, Jenks, Kiefer.	6,555	203,205
Sapulpa and Fisher.....	669	20,739
Cushing-Shamrock	17,692	548,452
Bristow, Kellyville and Depew	13,310	412,610
Pickett Prairie and North Bristow	1,652	51,212
Eastern Bristow or Slick	8,318	257,858
Total	48,196	1,494,076
Pawnee County—		
Cleveland	2,382	73,842
Keystone	1,470	45,570
Jennings	2,740	84,940
Otoe	583	18,073
Ralston-Masham	162	5,022
Total	7,337	227,447
Payne County—		
Yale, Quay and Ingalls...	4,369	135,439
North Cushing	1,120	34,720
South Cushing	348	10,788
Mehan-Ripley	1,019	31,589
Total	6,856	212,536
Oklahoma County—		
Trosper Park	3,410	105,710
Lincoln County—		
Stroud	1,053	32,643
Davenport	1,684	52,204
Kendrick	267	8,277
Total	3,004	93,134
Kay, Grant and Noble Counties—		
Blackwell	1,039	32,209
Vernon	1,235	38,285
Otstot	981	30,411
Deer Creek	827	25,637
Ponca City	693	21,483
Mervine	264	8,184
Braman	3,558	110,298
Hubbard	2,021	62,651
Thomas	837	25,947
Garrett	48	1,488
Tonkawa	10,704	331,824
Billings	170	5,270
Miscellaneous	247	7,657
Total	22,624	701,344
Garfield County—		
Garber	5,825	180,575
Logan County—		
Lovell	1,075	33,325
Marshall	10,344	320,664
Total	11,419	353,989
Carter County—		
Healdton	13,317	412,827
Hewitt	8,197	254,107
Graham	3,360	104,160
Brock	658	20,398
Fox	2,441	75,671
Sholom Alechem	13,049	404,519
Total	41,022	1,271,682
Stephens and Cotton Counties—		
Loco-Milroy	1,400	43,400
Comanche	958	29,698
Duncan	4,977	154,287
Walters	1,105	34,255
Kilgore	376	11,656
Total	8,816	273,296
Jefferson County—		
Hambro	2,485	77,035
Caddo County—		
Cement	1,502	46,562
Garvin County—		
Robberson	2,123	65,813
Grady County—		
Knox	4,567	141,577
Pontotoc County—		
Allen	25,845	801,195
Beckham County—		
Sayre	34	1,054
Marshall County—		
Madill	203	6,293
Total March	672,202	20,838,262
Total February	730,313	20,448,764
Difference	58,111	389,498

KANSAS

Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
Marion County—		
Florence-Urschell	410	12,710
Peabody	1,142	35,402
Covert-Sellers	521	16,151
Lost Springs	1,117	34,627
Total	3,190	98,890
Butler County—		
Elbing	1,598	49,538
Potwin	371	11,501
Cameron-Robinson	495	15,345
Wilson-Dunkle	1,498	46,438
Towanda	2,046	63,426
Fox-Bush	381	25,761
Nuttle-Koogler	1,598	49,538
Eldorado	7,222	223,882
Smock	168	5,208
Leon-Weaver	5,824	180,544
North Augusta	793	24,583
South Augusta	1,321	40,951
Sluss	256	7,936
Douglass	119	3,689
Keighly	731	22,661
Benton	19	589
Blankenship	696	21,576
Total	25,586	793,166
Greenwood and Woodson Counties—		
Sallyards	1,088	33,728
Teeter-Pixley-Scott	5,123	158,813
Virgil	5,472	169,632
Thrall-Burkett	1,370	42,470
Seeley	6,076	188,356
Polhamus	877	27,187
Miscellaneous	915	28,365
Total	20,921	648,551
Cowley County—		
Rainbow Bend	1,280	39,680
Slick	502	15,562
Graham	273	8,463
Rock	174	5,394
Clark	142	4,402
Eastman	412	12,772
Winfield-New Salem	1,391	43,121
Miscellaneous	547	16,957
Total	4,721	146,351
Other Counties—		
Sumner	12,828	397,668
Rooks	17	527
Rice	972	30,132
Russell	3,491	108,221
Reno	39	1,209
Sedgwick	10,405	322,556
McPherson	240	7,440
Harvey	26	806
Coffey	242	7,502
Chautauqua	2,201	68,231
Elk	2,170	67,270
Wilson	179	5,549
Montgomery	2,433	75,423
Allen	458	14,198
Neosho	483	14,972
Lyon	816	25,296
Miami	879	27,249
Franklin	329	10,199
Douglas	19	589
Bourbon	11	341
Linn	186	5,766
Anderson	1,392	43,152
Labette	21	651
Chase	18	558
Woodson	923	28,613
Total March	95,196	2,951,076
Total February	91,356	2,529,968
Difference	3,840	421,108

NORTH TEXAS

Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
Burkburnett	10,411	322,741
Electra	13,328	413,168
Iowa Park-K.M.A.	3,061	94,891
Archer County	16,771	519,901
Clay County	515	15,965
Wilbarger County	25,945	804,295
Montague County	7,094	219,914
Young County	6,909	214,179
Baylor County	74	2,294
Cook County	4,947	153,357
Total March	89,055	2,760,705
Total February	86,171	2,412,788
Difference	2,884	347,917

CENTRAL TEXAS

Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
Coleman	3,227	100,037
Comanche	232	7,192
Stephens	6,347	196,757
Eastland	5,946	184,326
Brown	8,383	2,598,873
Callahan	3,977	123,287
Runnels	143	4,433
Throckmorton	670	20,779
Jack	1,468	45,508
Palo Pinto	414	12,834
Shackelford	13,236	410,285
Erath	246	7,626
Jones	4,591	142,321
Total March	48,879	1,515,249
Total February	48,868	1,368,304
Difference	11	146,945

EAST CENTRAL TEXAS

Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
Boggy Creek	3,687	114,299
Cedar Creek	172	5,330
Currie	465	14,420
Mexia	5,758	178,481
Minerva	705	21,847
Nigger Creek	372	11,544
Powell	8,614	267,026
Richland	399	12,374
Thrall	32	999
Wortham	1,298	40,250
Total March	21,502	666,569
Total February	20,695	579,471
Difference	807	87,098

WEST TEXAS

Daily Average and Monthly Production in March

Field and County—	Daily av. (bbls.)	Month (bbls.)
Big Lake, Reagan	17,449	540,925
Settles, Glasscock and Chalk-Howard	42,074	1,304,307
Church & Fields, Crane..	28,042	869,301
Connell, Ector	3	93
Harding, Howard	15	465
Hendricks, Winkler	171,108	5,304,360
Ira, Scurry	22	673
McCamey-Taylor, Upton.	6,659	206,426
McElroy, Crane	12,473	386,652
Powell, Crockett	2,142	66,409
Stephens, Fisher	1,082	33,537
Skelly, Reagan*	....	.....
Waddell, Crane	43	1,334
Westbrook and Iatan, Mitchell	2,451	75,987
Wheat, Loving	605	18,768
Yates, Pecos	90,317	2,799,867
Total March	374,487	11,609,104
Total February	355,931	9,966,066
Difference	18,556	1,343,038

*Included in Big Lake.

(Continued on Next Page)

TEXAS PANHANDLE
Daily Average and Monthly Production in March

County—	Daily av. (bbls.)	Month (bbls.)
Hutchinson	26,534	822,554
Carson	6,316	195,796
Gray	24,405	756,555
Moore	1,532	47,492
Potter	12	372
Wheeler	724	22,444
Total March	59,523	1,845,213
Total February	56,507	1,582,196
Difference	3,016	263,017

NORTH LOUISIANA
Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
Caddo, light	8,499	263,469
Caddo, heavy	3,106	96,286
Homer	3,988	123,628
Haynesville	5,499	170,469
DeSoto-Red River	3,985	123,535
Elm Grove	601	18,631
Bellevue	658	20,398
Cotton Valley	2,951	91,481
Uranla	5,853	180,885
Pleasant Hill	454	14,074
Sarepta-Cartersville	230	7,130
Total March	35,806	1,109,986
Total February	35,358	990,024
Difference	448	119,962

ARKANSAS
Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
El Dorado	2,563	79,453
Smackover, light	6,343	196,663
Smackover, heavy	50,271	1,558,401
Stephens	1,010	31,310
Nevada County	1,304	40,424
Lisbon	1,460	45,260
Bradley	9,263	287,153
Champagnolle	100	3,100
Total March	72,314	2,241,734
Total February	76,936	2,154,194
Difference	4,622	87,540

GULF COAST
Daily Average and Monthly Production in March

TEXAS

	Daily av. (bbls.)	Month (bbls.)
Allen Dome	24	748
Barbers Hill	7,461	231,292
Batson	1,434	44,447
Big Creek	4,087	126,691
Blue Ridge	3,838	118,994
Brenham	150	4,650
Boling	2,039	63,224
Clay Creek	3,508	108,756
Damon Mound	650	20,150
DeWalt	9,334	289,343
Fannette	760	23,546
Goose Creek	6,588	204,232
High Island	1,497	46,409
Hull	10,273	318,465
Humble	4,911	152,227
Jasper	16	498
Markham	378	11,733
Nash	600	18,600
North Dayton	472	14,665
Orange	3,007	93,232
Orchard	70	2,160
Pierce Junction	12,355	383,009
Raccoon Bend	2,248	69,680
Saratoga	944	29,269
Sour Lake	2,772	85,931
So. Liberty-So. Dayton	6,156	190,845
Spindletop	33,801	1,047,817
West Columbia	7,733	239,727
Total	127,107	3,940,340

LOUISIANA

	Daily av. (bbls.)	Month (bbls.)
Anse La Butte	45	1,400
Bayou Bouillon	270	8,353
Edgerly	856	26,527
Jennings	823	25,503
Hackberry	6,694	207,516
Lockport	4,164	129,097
Sorrento	509	15,779
Starks	518	16,060
Sulphur	2,020	62,625
Sweet Lake	394	12,215
Vinton	4,520	140,117
Welsh	31	975
Total Louisiana	20,844	646,167
Total Gulf Coast March	147,950	4,586,507
Total Gulf Coast Feb.	141,413	3,959,613
Difference	6,537	616,894

SOUTHWEST TEXAS
Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
Dale	570	17,654
Bruner	31,603	979,706
Gonzales	90	2,775
Kingsville	284	8,789
Larremore	226	6,997
Luling	12,942	401,222
Lytton Springs	1,131	35,056
Maverick	7	203
McMullen	50	1,560
Medina	36	1,114
Mirando	13,044	404,373
Refugio	1,147	35,565
Somerset	1,895	58,772
Yost	2,181	67,626
Total March	65,206	2,021,412
Total February	54,559	1,527,677
Increase	10,647	493,735

WYOMING
Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
Big Muddy	2,307	71,517
Oregon Basin	2,793	86,583
Byron	35	1,085
Dutton	50	1,550
Elk Basin	792	24,552
Ferris	23	713
Grass Creek	2,255	69,905
Greybull	5	155
Hamilton	616	19,096
LaBarge	1,892	58,652
Lance Creek	276	8,556
Lost Soldier	3,397	105,307
Osage	458	14,198
Poison Spider	1,207	37,417
Rock Creek	2,325	72,075
Rex Lake	113	3,503
Lander	505	15,655
Salt Creek	32,480	1,006,880
Simpson Ridge	55	1,705
Total March	51,584	1,599,104
Total February	51,512	1,442,336
Difference	72	156,768

MONTANA
Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
Cat Creek	1,393	43,183
Kevin-Sunburst	5,362	166,222
Pondera	2,725	84,475
Lake Basin	3	93
Total March	9,483	293,973
Total February	9,202	257,656
Difference	281	36,317

COLORADO
Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
Craig	1,076	33,356
Fort Collins	2,527	78,337
Florence	1,166	36,146
Iles	1,519	47,089
Tow Creek	461	14,291
Miscellaneous	126	3,906
Total March	6,875	213,125
Total February	6,510	182,280
Difference	365	30,845

NEW MEXICO
Daily Average and Monthly Production in March

	Daily av. (bbls.)	Month (bbls.)
Artesia	953	29,543
Cap Rock (Maljamar)	230	7,130
Lea and Eddy	513	15,903
Hog Back	510	15,810
Rattlesnake	675	20,925
Table Mesa	10	310
Total March	2,891	89,621
Total February	2,978	83,384
Difference	87	6,237

CENTRAL WEST FIELDS

(Continued from Page 59)

Among the operators to visit Perry County, the past week was G. W. McGinley of Bowling Green, Ky., who operates over 100 wells in the Bowling Green Field of Warren County, Kentucky. He became interested in a block of leases and expects to move in a drilling rig from Bowling Green and drill several tests as soon as weather conditions improve. He was a guest of J. H. McClurkin, another Kentucky-Tennessee operator who has extensive holdings in Perry County. Other well known oil men scouting in Perry County are Raydure, of Bowling Green, Ohio; Rickenbrode, of Irvine, Ky.; and Layman C. Scott, of Toledo, Ohio, are arranging to start operations on their holdings. R. L. Bailey, who drilled a large number of wells in Lee County, Kentucky, several years ago, and his three associates, were also visitors to the Perry County area and are making preparations for an extensive drilling campaign.

Spencer County, adjoining Perry to the west, is also in line for an active development.

Other Indiana Work

In Gibson County, in the southwestern part of the State, the Ohio Oil Co.'s test, 200 feet from the north line and 700 feet from the west line of the J. A. Woods farm, in the southeast quarter of Section 4, Union Township, came in a dry hole at a depth of 1,779 feet. In Center Township, the Shell Petroleum Corp.'s test in the southwest corner of the J. Schlump farm, SE, Section 5, was dry at 1,702 feet. The Texana Oil Co.'s No. 5 well, 225 feet from the south line and 500 feet from the west line of the Dave Hutchinson farm, in the NE, of

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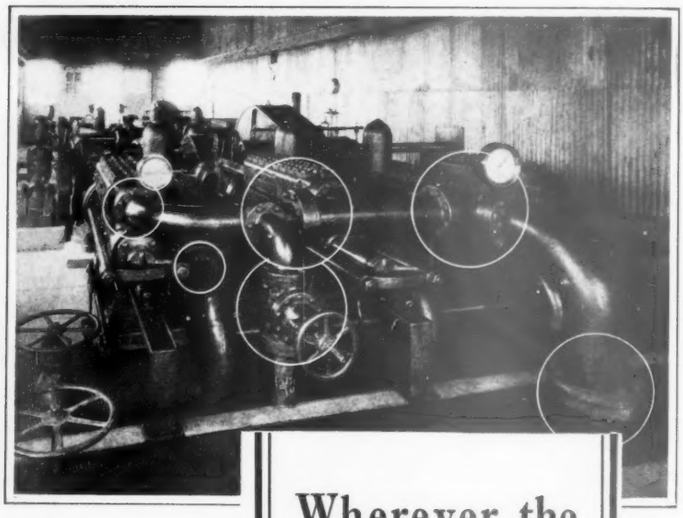

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Section 13, same township, was also a dry hole.

Late advices from Spencer County are that the test drilling on the Terrell Weatherhold farm, an offset to the well at Rocky Hill, near the old Gentryville Field, found a 10-foot dip and is reported a dry hole. The drilling was by R. W. McMahon of Owensboro, Ky. Ellis and Young are reported to have a showing in their test on the William Bretz farm, in the same vicinity.

ILLINOIS

Three completions are reported from Illinois, all outside of the older producing areas. The best was found by the St. Clair County Oil & Gas Co. in the southeast corner of the Hall and Weihl property, in Lot 39, Sugar Loaf Township, St. Clair County, which produced an initial of 90 bbls. at from 475 to 530 feet. This test was formerly reported as drilling under the name of Timberlake and Benoist. The Ohio Oil Co.'s test in the northeast corner of the Oliver Anderlan farm, in the southwest quarter of Section 33, same township, was a dry hole at 743 feet.

Steele Brothers have drilled a dry hole in a wildcat venture in the southeast corner of the Old Quarry No. 2 property, Section 23, Columbia Township, in the extreme northern part of Monroe County, at a depth of 650 feet. Monroe County adjoins St. Clair County to the west and is south and a little west of East St. Louis, and north of the old Waterloo Field, also in Monroe County.

In Petty Township, Lawrence County, the Ohio Oil Co. abandoned No. 2 on the Albert Westall 14 acres, in the NW, Section 12; No. 1 on the S. O. Stolts line well, SE, Section 14, and No. 13 on the D. B. Stoltz No. 2 farm, NW, Section 11, also pulled out No. 15 J. F. Griggs No. 1 farm, NE SE, Section 32, Bridgeport Township.

In Centralia Township, Marion County, Stella Timberlake abandoned No. 2 in the northeast corner of the Miller-Mackey property, NW, Section 30.

TRAINING SCHOOL MAKES SHIFT TO NATURAL GAS

(Continued from Page 78)

reaming to proper size, the insertion of adapters drilled in proper size, after reaming out manufactured gas orifices to take these adapters, etc. It was found that if a man had aptitude one week of this intensive training was sufficient to teach him how to handle almost any appliance. During the last few days of training natural gas in tanks was brought from the city gate station so that all the men could see how natural gas burned in manufactured gas appliances and how adjustments for natural gas could be made.

While some types of appliances presented special problems it was found that the great majority could be converted with minor changes. About 38 per cent of all ranges could be adjusted by screwing down existing orifices. Sixty per cent were converted by little brass adapters riveted into the orifices. Only 2 per cent required special treatment. Of the automatic and instantaneous water heaters about 15 per cent were adjusted by screwing down orifices, 65 per cent required new orifices, and the remaining 20 per cent required other special treatment.

Encouraged to Report Back

During the latter part of the training period the men were trained in two shifts of 8 hours each. It was possible to handle about 50 men per shift. At the end of the training period the men were laid off with instructions to report back on a set date and were promised a retainer of $1 per day for each working day they were off if they reported back and went through the conversion period.

It is interesting to note that before any man was hired for this work he had to submit to being finger printed. This work was done by a finger printing agency. We did not wish crooks to get an excuse for entering the homes of our customers and this finger printing eliminated a number of applicants with bad records. Before going out on the work each man was given an identification card as well as his finger print card and in our advertising, customers were requested to demand that men purporting to be our adjusters show their credentials. On the last day of training all adjusters were given a talk on courtesy and proper behavior on customers' premises.

Before turning gas into a district, each customer was sent a red card on which was the announcement that natural gas would reach them on a given date and requesting them to use only the top burners of their ranges until adjustments had been made. They were advised that our men would reach them just as soon as possible and requested to bear with us in our efforts to give them the new service. This doubtless reduced the number of phone calls.

Few Unreasonable Requests

In general, we found that in the sections of the city where working people lived we had few cases of impatience and few unreasonable requests. Where we were asked for special service on account of sickness we sent special men to handle such cases. We also had men stationed at hospitals and other public institutions at hotels, restaurants and other places where service was of vital importance, to make adjustments just as soon as natural gas arrived.

The conversion of customers' appliances began on December 31, 1928, and the entire city had been covered on January 17, 1929. The conversion of ranges and water heaters averaged 15 customers per man per day and the total cost of conversion, including training of men, actual conversion labor, materials, etc., averaged $2.50 per customer.

The changing from manufactured gas to natural gas was a most interesting experience for all concerned. Due to careful planning months ahead of the arrival of natural gas, the whole conversion went off with machine-like precision, and with general satisfaction to our customers. Some unexpected things happened. Were we to do it again we could probably make some improvements. The heartiest spirit of co-operation was shown by the press, the public, the city administration and all others concerned and the utmost loyalty was manifested by our employes many of whom worked many extra hours each day without expecting any extra compensation. The general spirit was to get the job done as well and as quickly as possible.

KENTUCKY-TENNESSEE

(Continued from Page 62)

ton lease, in the Burton Pool, are both reported dusters. These two wells are on the east 100 acres of the farm.

The Cumberland Petroleum Co.'s test on the Ambrose, in the Salmon Pool, is reported making an excellent gas volume. Wade & Shinner's test on the Hick Litsey, in the Burton Pool, is a duster. Vickers, White and others found a dry hole on the Linus Howard 198 acres in the Ward Pool.

Ohio County Wells

Snowden-McSweeney interests have the best of the late completions in the Ohio County fields, in No. 4 on the Duke heirs 105 acres, in the Bartlett Pool, a short distance southwest from Taffy and near the good wells of Hupp, Duff and others on the Bartlett and Trodgen farms.

In the Bells Run area, northwest of the rich Ambrose Pool, the C. C. C. Oil Co.'s second well on the Tom Howard farm, showed around 140 bbls. initial while No. 3 is reported around 100 bbls.

C. E. Daugherty and others' No. 1 on the north 50 acres of the L. Trodgen farm, in the Bartlett Pool, is reported good for 80 bbls., and extending the pool some, and will bring about the drilling of new offsets on other leases.

Huff, Duff and others' Nos. 5 and 6 Ellis Bartlett, in the Bartlett Pool, near Taffy, are reported good for 80 and 25 bbls., respectively. Wood Oil Co.'s No. 10 on the R. A. Duke 200 acres, in the Sunnydale Field of Ohio County, is reported as drilling in a duster.

Bowling Green Field

Southwest of Bowling Green, in Warren County, the Wood Oil Co.'s test, 600

feet from the north line and 1,150 feet from the east line of the Hubert Travelstead farm, is reported good for 1,000,000 feet of gas at a depth of 680 feet. In the same area, the Lucky Strike Oil Co.'s second test, 500 feet from the north line and 750 feet from the east line of the W. R. Walters farm, developed no indications and is dry.

Southwest of Bowling Green, same county, P. H. Lavelle's No. 4 well, 210 feet from the south line and 1,500 feet from the east line of the Lydia E. Porter farm, was completed in the deep sand at 1,082 feet, where it pumped an initial of 10 bbls.

In the northeastern part of Allen County in the Gainesville Field, McDonald and Kraft's test on the Jess Gibbs, is reported dry at 467 feet.

The Ohio Oil Co.'s test on the H. D. Whitefield near White Plains in Hopkins County, proved a dry hole at a depth of 2,017 feet and the outfit is being moved to Muhlenburg County.

In Lee-Owsley Counties, the Petroleum Exploration Co. drilled a duster on the Scott heirs farm. In Clay County, in the eastern Kentucky area, the Petroleum Exploration Co. drilled in an average gas producer on the George Brewer farm, and is drilling on the J. F. Johnson farm, on Crane Creek east of the gas well on the Crawford lease.

In Daviess County, L. C. Young has dry holes in No. 10 on the K. N. Yeiser, and No. 1 on the Otis Moseley, in the Red Hill Pool, and the Whitmer Oil & Gas Co. is reported with a duster on the Arley Bryant farm.

Field Pickups

Alex T. Wilson, who opened the Miller's Creek oil pool near Irvine, Ky., in 1916, has moved a rig to drill on the John S. Higdon farm, near Whitesville, Daviess County. He is the son of S. S. Wilson for many years connected with the old Mellon interests.

The Red Bank Gas of Bradford, Pa., is drilling on the Jack Moseley farm, about 12 miles south of Owensboro, on Panther Creek, and is reaming through a water sand at a depth of 1,150 feet to set casing to shut off water as a deep test will be made of that area.

Vickers, White and others having brought in a dry hole on the Linus Howard least, near Oklahoma, in Daviess County, in what is known as the Ward Pool, have moved the drilling outfit and started on the W. L. Mills farm, southwest of Oklahoma, in the same county.

Ray Young is drilling a wildcat on the George W. Wilson farm, southwest of Owensboro, in Daviess County, and if oil or gas is not found in commercial quantities, the owners expect to make a deep test to at least 2,100 feet, with possibilities of finding the McCloskey sand that developed many large gushers in the Lawrence County Field of Illinois. The McCloskey sand was found in a test drilled in Union County some few years ago that showed traces of oil and gas.

The C. C. C. Oil Co. is getting busy in both Daviess and Ohio Counties as the company has several strings of tools at work, mostly in Daviess County, at this time. This company is drilling No. 4 on the Mitchell Birkhead in the Bells Run Pool, in northern Ohio County.

John Lyle, prominent oil operator, in the Owensboro Field, is spending a week with his parents at Old Furnace, in Estill County.

Tom Hays, of Louisa, in eastern Kentucky, is now in the Owensboro Field, and expects to start a well on an unknown lease, 5 miles east of Fordsville, in Ohio County.

Jess Watts, Owensboro operator, has returned from a look over the Muhlenburg County Field where the Ohio Oil Co. recently brought in a big oil well on the Kennedy farm, 2½ miles south of Greenville. He considers it among the best of the present producing wells in any part of Kentucky, and that the county will get a heavy drilling campaign, regardless of the depth in which the oil is found. James C. Ellis, of Owensboro, will move a drilling outfit at once to Muhlenburg County where he has secured some acreage near where the big Kennedy well is.

EASTERN FIELDS

(Continued from Page 62)

and has made a location on the Preston Helmick farm. In Reedy district, the Heck Oil Co. is fishing on the W. H. Roach farm. In McComas district, Cabell County, the Hamilton Oil & Gas Co. is drilling on the Robert E. Childers farm. In Scott district, Boone County, the Hope Natural Gas Co. has started to drill on the F. B. Chambers farm. In Washington district, W. G. McCorkle has started to drill a second test on the W. L. Covert farm. In Jefferson district, Lincoln County, the United Fuel Gas Co. is rigging up on the Della Mullens farm. The Hope Natural Gas Co. has made a location on the Sylvester Adkins farm. In Union district, Ritchie County, the Pittsburgh & West Virginia Gas Co. is rigging up on the J. E. Pierce farm and made a location on the W. H. Hall farm.

In Murphy district, Ritchie County, Park Bowser has started to drill on the W. R. Baker 40 acres. In Grant district, the Hudson Oil Co. has made a location on the G. F. Crummett farm. In the same district, the Vienna Oil Co. is rigging up on the Daniel Wilcox farm. In Union district, Wood County, the Valley Mills Oil & Gas Co. is drilling on the F. F. Sugden farm. In William district, same county, Riggs & Reynolds have rig material on the John C. Russell farm.

Calhoun County

In Sherman district, Calhoun County, M. F. Crowley has started to drill on the C. W. Cooper farm. In DeKalb district, Gilmer County, Alfred Ellis & Co. are rigging up to drill deeper No. 2 on the M. R. Ellis farm. In the same district, Frank Golden is building the rig for a second test on the G. W. Miller farm. In the same district, the Philadelphia Natural Gas Co. has drilling material at a location on the Anna M. Kelly farm. The same company has made a location on the Samuel E. West farm.

In Ravenwood district, Jackson County, the Heck Oil Co. has a rig on the C. O. Parrish farm. In Lee district, Calhoun County, the Calhoun Oil & Gas Co. is rigging up on the L. G. Garrett farm. In the same district, the United Fuel Gas Co. is building a rig on the James E. Roberts farm. In the same district, F. F. McIntosh has started to drill on the W. H. Sapp farm. In Sherman district, McIntosh & Miller have started to drill on the E. E. Miles farm.

On Grave Creek, inside the corporate limits of Cameron, Cameron district, Marshall County, G. B. Patterson has completed the rig for a test on the Della Reese lot. Two miles in advance of developments in Center district, Calhoun County, W. H. Bickel has the rig completed on the A. Hardman farm. In Church district, Wetzel County, the Pure Oil Co. is building the rig for another test on the W. C. Cole farm.

Drilling Deeper

In Union district, Wood County, Strain Brothers are drilling down from the salt sand to the Berea grit an old well on the B. C. Strain farm. It was dry in the Salt sand. In Cameron district, Marshall County, the Manufacturers Light & Heat Co. is hauling rig material to a second location on the E. E. Winters farm. In Liberty district, same county, the Woodruff Oil & Gas Co. has a rig up on the H. Ernest farm.

SOUTHWEST PENNSYLVANIA

In Morris Township, Green County, the Carnegie Natural Gas Co. has a duster in the Bayard sand on the T. S. Mankey farm. In Penn Township, Allegheny County, the Unity Oil Co. has drilled to a depth of 2,750 feet on the Joseph Cohen farm and shut down. In Washington Township, Westmoreland County, the Phillips Gas & Oil Co. has drilled to a total depth of 3,315 feet on the Minerva Bennett farm and shut down.

In the Taylorstown district, Washington County, M. L. Pethtel & Co. has completed in the Gordon sand a second test on the M. L. Pethtel farm. It is a very light gasser.

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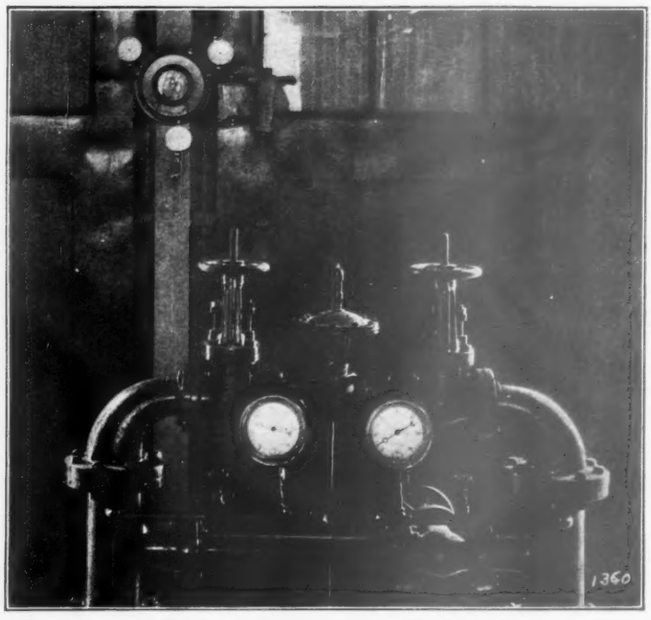

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THIS installation insures constant steam pressures under varying load conditions by properly regulating the gas fuel supply to the burners. Full steam pressures are maintained under extreme operating conditions, thus insuring a high efficiency and consistent operation of the boiler plant.

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Write for additional information on this installation and others for the oil and gas industry.

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CRUDE STORAGE GAIN IN GULF AND SOUTHWEST

HOUSTON, Tex., May 11.—Crude storage in the Gulf Coast and Southwest Texas increased 1,085,614 bbls. during the month of March, according to figures just compiled here. Stocks on April 1 totaled 26,224,248 bbls. as against 25,138,634 bbls. on March 1. Figures were:

GULF COAST FIELDS

	Steel	Earthen
Texas		
Batson	4,992	.....
Barbers Hill	12,000	.....
Big Creek	50,191	.....
Boling	32,975	.....
Damon Mound	8,975	.....
Goose Creek	101,900	16,000
Hull	366,790	.....
Humble	1,257,159	815,739
Liberty	42,755	.....
Markham	39,794	.....
North Dayton	2,000	.....
Orange	288,130	.....
Pierce Junction	86,300	.....
Raccoon Bend	121,514	.....
Saratoga	35,628	.....
Spindletop	8,478,316	175,000
Sour Lake	1,571,841	.....
West Columbia	1,241,776	239,990
Total	13,663,036	1,246,729
Louisiana		
Edgerly	30,000	.....
Evangeline	49,800	.....
Lockport	555,500	.....
Vinton	293,445	.....
Total	928,745	.....
Coastal Refinery Tank Farms and Terminals		
Almeda	79,200	.....
Baytown	1,789,608	.....
Crosby	135,000	.....
East Houston	718,300	.....
Englewood	65,500	.....
Lynchburg	65,000	.....
Norsworthy	536,060	.....
Sinco	698,600	.....
Texas City	1,865,950	.....
Webster	1,503,232	.....
Total	7,456,450	.....
Total Gulf Coast April 1	22,048,231	1,246,729
Total Gulf Coast March 1	21,009,617	1,391,339
Difference	1,038,614	144,610
Southwest Texas		
Cedar Creek	156,527	.....
Laredo	2,183,185	.....
Lockhart	18,200	.....
Luling	500,756	.....
Salt Flat	70,620	.....
Total	2,929,288	.....
Total March 1	2,737,678	.....
Difference	191,610	.....

PRODUCTION OF STEEL STILL AT HIGH LEVEL

By B. E. V. Luty

PITTSBURGH, Pa., May 13.—The usual time of seasonal recession in steel production has now been passed by about seven weeks, and everyone in the trade is alert to catch the first sign of recession in demand, or rather of pressure upon the mills for deliveries. In bars, sheets and strips in particular consumers have been seeking heavier deliveries for more than two months. It is not likely they have suffered much inconvenience, or have had their operations restricted, but the flow of steel has required close watching to make sure that mills should ship the particular size, etc., immediately required.

Substantially the whole open-hearth capacity is running full, regular capacity ratings being frequently exceeded, while Bessemer capacity is almost fully engaged. While the mills have backlogs, or shipping orders piled up, in various finished steel products, experiences of the past show it would not take a great deal to alter the situation as to delivery pressure. If a consumer is receiving day by day just enough steel to get along with, and then for a few days receives a few per cent excess he immediately becomes concerned in the other direction. He does not cancel but he may instruct deliveries to be stretched out a little.

There are occasional reports of decreases in production by some automobile manufacturers, but in general the phenomenal high rate is maintained. The average date of seasonal recession has been passed by about a fortnight, and some observers, in view of the very heavy production earlier in the year, had been looking for recession earlier than usual.

Seamless tube mills continue to operate at about 70 per cent, with pipe mills at about 55 per cent, making a general average for the tubular goods industry of about 60 per cent.

PRODUCTION IN ECUADOR SMALL BUT INCREASING

Ecuadorian production of petroleum has increased rapidly in recent years, from 5,866,202 gallons in 1925 to 13,310,759 gallons in 1926, 17,101,466 gallons in 1927, and 22,134,423 gallons the first six months of 1928. The bulk of the production has come from the Anglo-Ecuadorian Oilfields, Ltd., which reported 16,161,647 gallons in 1927 and 21,394,182 gallons in the first half of last year. The McKay Harmsworth Oil Exploration produced 703,311 gallons in 1927 and 566,191 gallons in the first half of 1928.

With the exception of the Anglo-Ecuadorian, Vice Consul W. Allen Rhode, at Guayaquil, reports no concessionaire has obtained sufficient petroleum to supply local needs and furnish a surplus for exportation. From September, 1925, to September, 1928, this company exported a total of 152,704 tons of crude petroleum and 4,655 tons of petroleum residue. Most of the shipments went to Atlantic Coast ports of the United States, although some consignments to Canada, England, and Peru are recorded.

The Anglo-Ecuadorian was established in London in 1919 and registered in Ecuador in 1923. In 1927 the capital was increased to £1,500,000, one-third of which was to be used exclusively for drilling new wells. The company owns 95,978 acres of oil land, distributed in three groups called north, south, and center, and subdivided into 98 well sections. It has rented an additional area of 1,000 acres under the provisions of the hydrocarbon law.

Current production is reported from 56 completed wells, and also from four of the 14 now drilling. Owing to new equipment and experienced drillers, 63,261 feet were drilled during the first eight months of 1928, compared with 53,091 feet in 1927. The company reported an output of 12,500 tons (approximately 4,000,000 gallons) for the month of August and 3,120,088 gallons for June.

The Anglo-Ecuadorian has storage installations at La Libertad, on the Pacific Coast near Santa Elena. Five tanks have a total capacity of 28,000 tons, and there are 36 buildings, including refineries, laboratories, and administrative houses. During the first eight months of 1928 the refineries treated 2,419,620 gallons of crude and furnished an output of 406,148 gallons of gasoline, 403,143 gallons of kerosene, 243,608 gallons of gas oil, 15,627 gallons of Diesel oil, 16,966 gallons of lubricating oil, and 1,285,020 gallons of residue. The refined products are transported in a small tanker to Guayaquil, where a canning and boxing plant and storage tanks are located. September, 1928, exports included 900 cases of gasoline and 300 cases of kerosene shipped to Cali, Colombia.

The McKay Harmsworth Co., organized in 1918 by English and Ecuadorian interests, owns 27 mineral sections comprising 22,906 acres. Although £200,000 have been invested no outstanding success has been recorded. Drilling during 1928 totaled 8,560 feet, and the company has 27 wells producing, 5 drilling in, and 173 hand wells. It reports treatment of 390,900 gallons of crude during the first nine months of the year, with the production of 104,219 gallons of gasoline, 500 gallons of kerosene, 2,295 gallons of gas oil, 460 gallons of lubricating oil, and 205,228 gallons of residue.

AIRPLANES IN OIL FIELDS

CHATHAM, Ontario, May 11.—Airplanes are being increasingly used in connection with the Alberta fields. Recently a Calgary party headed by Dr. T. A. Link, chief geologist of Imperial Oil, Ltd., made an air survey of foothills structures between Cochrane and South Turner Valley, the trip occupying an hour and 45 minutes to cover territory that normally would require days.

OKLAHOMA FIELDS

(Continued from Page 42)

20-5-7, Pontotoc County, northeast of Ada, had the Wilcox sand at 4,089 to 4,193 feet, with a hole full of water and will be abandoned.

American-Maracaibo Oil Co.'s No. 1 Henry, NE cor. NW SE, Section 27-12-12, Okfuskee County, the first well to find the Wilcox sand productive in that part of the county, had the sand at 3,333-74 feet after being shot. It is producing around 150 bbls. a day. The above well has caused considerable activity nearby. One of the first transactions made was the purchase by the Red Bank Oil Co. from the Dave Oil Co. of Okmulgee of the 65 acres in the E half SE, Section 27-12-12, on which they have staked a location in the NW NE SE.

Minnehoma Oil Co.'s No. 2 Fixico, SW SE, Section 29-12-10, Okfuskee County, has been completed in the Gilcrease sand at 3,090-3,123 feet and is making 27,000,000 feet of gas.

Indian Territory Illuminating Oil Co.'s No. 1 Cook, SW cor. NW Section 10-1-11, Coal County, is drilling at 7,130 feet in blue shale with nothing showing. The test has been in this same formation for over 5,000 feet and no sign of the Cromwell sand as yet. It is the opinion of some that the well is drilling in a fault, or that it has in some way turned considerably from the vertical. The well is being drilled on a structure worked by the Oklahoma Geological Survey and is the deepest well in the State from a geological standpoint.

The Tidal Oil Co. and others have made a location in the SW NE of Section 8-4-2, northeastern Garvin County. This wildcat test will have an important bearing in its relation to future drilling in that area as it is expected to test a large block of leases the owners are holding in the vicinity.

Summary of Proration Test

A summary of the production for the fifth period of proration in the Seminole and St. Louis areas is shown by the following table:

Pool—	Daily potential production	15 days allowed production	15 days actual production	Over	Short
Maud	18,365	206,610	202,129	.....	4,481
Searight	10,123	113,883	113,947	64	.....
Mission	39,629	445,833	438,902	.....	6,931
Carr City	18,234	205,134	200,653	.....	4,481
Seminole	43,616	490,690	498,122	7,432	.....
Bowlegs	45,402	510,781	515,683	4,902	.....
St. Louis	129,737	1,459,547	1,459,907	360	.....
Little River	88,006	990,074	1,004,703	14,629	.....
Earlsboro	77,715	874,283	891,491	17,208	.....
Total	470,827	5,296,835	5,325,537	28,702	.....

Actual average prorated production one day 355,036 bbls.

The above figures are taken from Umpire Ray Collins' statement covering Seminole and St. Louis areas that has been under a proration agreement for some time.

In Oklahoma City Pool

The Oklahoma City Pool will bear watching from now on as several of these tests are drilling below the 6,000-foot level and are racing to be first to reach the pay horizon from which the discovery well is producing at a total depth of 6,598 feet.

The two wells that have the best chance to reach the deep pay first are the Mid-Kansas Oil & Gas Co.'s No. 1 Fortson, C SW NE Section 24-11-3w, drilling at 6,050 feet, and the Sinclair Oil & Gas Co.'s No. 1 Stamper, NE SW NW Section 30-11-2w, drilling at 6,120 feet.

The Indian Territory Illuminating Oil Co. and others' No. 1 Fortson, C NE SW Section 24-11-3w, which has tested salt water three times, is to be drilled deeper. It is now at 5,107 feet. The same company's No. 1 Johnson, C NE NW Section 25-11-3w, is also drilling ahead after testing in sandy lime at 5,152 feet and finding salt water.

The discovery well in the deep sand known as the Indian Territory Illuminating Oil Co.'s No. 1 fee, C SE SE Section 24-11-3w, is declining in its oil production, and for May 13 produced 2,824 bbls. of oil and 312 bbls. of water.

The report that Hall & Briscoe's No. 1 Holmes, SE NW SE Section 10-11-3w, and the 80-acre tract the well is on, had been sold to Frank Davidson and others of California was untrue, and the well is being drilled deeper by the original owners at 4,750 feet.

Carter County

Magnolia Petroleum Co. has the rig up for No. 6 E. Hardin, NW cor. SW SE, Section 18-1s-3w. No. 4 N. Hardin, NE cor. SW SE, Section 18-1s-3w, has been completed for 78 bbls. in sands at 2,804-63 feet. No. 3 Johnson, NW cor. SW, Section 33-1s-3w, made 62 bbls. from sands at 3,510-4,084 feet. No. 1 Johnson, SE cor. NE NE, Section 4-2s-3w, was completed for 52 bbls. in sands at 2,953-3,391 feet.

Cotton County

Steve Linsen's No. 1 Lawler, NW cor. NE NW, Section 14-2s-11w, has been abandoned at 2,018 feet. Clifford Moore's No. 2 Moore, NW cor. NE NE SW, Section 2-2s-10w, swabbed 170 bbls. from sand at 2,174-90 feet.

Creek County

Magnolia Petroleum Co. has the rig on the ground for No. 35 Coker, SW cor. NW NW NW, Section 16-18-7. S. P. Smith & Coffee's No. 1 Maloney, CWL SW NW, Section 19-18-11 made 20 bbls. from sand at 710-23 feet. William Sherry and others' No. 1 Barnett, NE cor. SE NE, Section 24-19-9, is a dry hole at 2,844 feet. F. R. Billingslea and Devonian Oil Co.'s No. 1 Koch, SE cor. NW NE, Section 15-17-7, has been abandoned at 2,920 feet.

Mid-Continent Petroleum Corp.'s No. 5 Jackson, NW cor. NE SE, Section 15-17-7, is pumping 2 bbls. from sand at 2,873-75 feet. C. H. McCready and others' No. 1-A Hardridge, SW cor. NW SE, Section 30-17-11, made a 25-bbl. well in sand at 1,790-1,804 feet. Roxaline Oil Co.'s No. 3 Boling, NW cor. SW SW, Section 27-17-12, has been abandoned at 1,803 feet. C. G. Tibbens' No. 40 Conneseny, CSL SE NW, Section 30-15-9, is dry and abandoned at 1,270 feet. T. Kelly and others' No. 1 Anderson, SW cor. SE, Section 26-14-9, made a 70-bbl. well in sand at 3,004-42 feet.

Garvin County

Texas Pacific Coal & Oil Co.'s No. 1 Parnell, NW cor. NE, Section 16-1-3w, is drilling at 1,548 feet. Magnolia Petroleum Co.'s No. 29 Cowan, NW cor. SE NE, Section 15-1-3w, is dry and abandoned at 2,120 feet.

Haskell County

Charles Holden and others' No. 1 Smith, SE cor. Section 3-9-18, is rigging up.

Jefferson County

Sigler and others' No. 2 Peniston, NE cor. SE NW SW, Section 16-7s-5w, is rigging up a machine at 774 feet to drill in.

Kay County

Wilson and others' No. 1 Courter, SE cor. Section 23-27-1, is drilling at 60 feet. Wentz Oil Corp.'s No. 1 Preston, NW cor. SE SW, Section 32-27-1, has been abandoned at 4,095 feet.

Kiowa County

Connor & Son's No. 2 Zacharias, SW cor. NW NW NW, Section 25-7-16w, has drilled to 340 feet and shut down.

Muskogee County

Bryan Petroleum Co.'s No. 2 Simmons, SW cor. NW SW, Section 3-15-15, is drilling at 300 feet. Babcock Brothers' No. 5 Barnett, CSL NW NE, Section 8-15-15, is drilling at 300 feet. Bryan Petroleum Co.'s No. 2 Barnett, SW cor. SE NE, Section 8-15-15, is cleaning out to deepen from 1,622 feet. Mazda Oil Co. has a machine on the location for No. 1-A Jackson, NE cor. SE NW, Section 8-13-16. R. & R. Drilling Co.'s No. 1 London, SW cor. Section 17-13-16, is drilling at 300 feet.

Hisel & McQuown's No. 1 Strank, SW cor. SE NE, Section 31-15-19, has been

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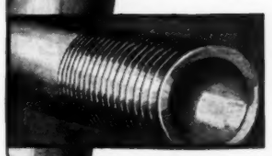

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abandoned at 975 feet. H. S. Swanson's No. 2 Jackson, SW cor. NE SW SW, Section 8-14-19, is dry and abandoned at 882 feet. Bement Oil Co.'s No. 5 Flowers, CWL SW NE, Section 5-13-16, is a dry hole at 1,779 feet. Robinson Brothers' No. 2 Lewis, SW cor. NW NE, Section 8-13-16, made 72 bbls. from sand at 1,628-42 feet.

Okfuskee County

Champlin Oil & Refining Co.'s No. 1 Campbell, SE cor. NE SW, Section 29-12-10, is drilling deeper at 3,450 feet. Minnehoma Oil Co.'s No. 1 Fixico, NW cor. SW SE, Section 29-12-10, which is being drilled deeper, is running 5-inch casing at 2,938 feet. Superior Oil Corp. and others' No. 1 Carolina, SE cor. Section 6-11-7, is a location. Pure Oil Co.'s No. 1 Jimboy, C NW NW, Section 25-11-10, is rigging up to deepen. Mid-Continent Petroleum Corp. made location for No. 1 Dindy "C," NW cor. SE NE, Section 31-11-11. Independent Oil & Gas Co. and others moved the rig out for No. 1 Lowe, SW cor. NE NW, Section 22-10-11.

Okmulgee County

Jackson & Wise's No. 9 Adams, SW cor. Section 3-15-11, is drilling at 2,170 feet. J. N. Buzzard and others' rig is up for No. 1 Clarkson, NW cor. SE NW, Section 32-15-13. Taylor & Geiger's No. 9 Tiger, CWL NE SW, Section 22-15-14, is drilling at 550 feet. J. M. Scott and Shaffer Oil & Refining Co.'s rig is up for No. 1-A Cornelius, SW cor. SE, Section 10-14-12. Riney & Williams' No. 4 Love, SE cor. NE SW, Section 9-14-14, is cleaning out at 1,256 feet.

Kessler Petroleum Co.'s No. 2 Colbert, CNL NW NW, Section 16-14-14, is drilling at 320 feet. H. H. Diamond Oil Co. made location for No. 4 Jones, SW cor. NW NW, Section 27-13-11. Kellser Petroleum Co. moved a machine to the location for No. 2 Mickens, SW cor. SE, Section 28-13-13. Riverland Oil Co. has a machine on the location for No. 1-A Atkins, CWL SE, Section 17-13-15. Red Bank Oil Co. made location for No. 1-A Henry, NW cor. NE SE, Section 27-12-12.

Kirkland & Son's No. 1-A Green, NE cor. SE, Section 24-15-12, was completed for 7 bbls. in sand at 1,448-1,534 feet. Foreman & Wise's No. 5 Rowe, NE cor. Section 10-15-14, has been abandoned at 1,705 feet. J. W. Winemiller's No. 1-A Hawkins, SE cor. SW, Section 21-14-11, made a gas well of 750,000 feet at 1,340 feet. Empire Oil & Refining Co.'s No. 1 Sharp, Section 29-14-12, is dry and abandoned at 2,957 feet. J. E. Wallace's No. 6 Colbert, NW cor. SW NE, Section 14-14-14, has been completed for 30 bbls. in sand at 1,722-56 feet. J. Rebold and others' No. 4 Williams, CEL NW NE, Section 22-13-12, made a 25-bbl. well in sand at 2,895-2,912 feet.

Stephens County

Pace and Texhoma Oil Co. made location for No. 3 Houston, SE cor. NW SW, Section 2-2s-8w. Pace and others' rig is up for No. 3 Bristowe "C," NW cor. SW SW NW, Section 18-2s-7w. Amerada Petroleum Corp. and J. Beard's No. 1 Bolton, SE cor. NE SE, Section 22-1-9w, is dry and abandoned at 2,347 feet. American Pipe Line Co.'s No. 5 Dexter, SE cor. NW, Section 34-1s-8w, was completed for 135 bbls. in sand at 1,851-57 feet. Lone Eagle Oil Co.'s No. 9 Simpson, NW cor. SE, Section 34-1s-8w, is producing 100 bbls. from sand at 1,859-61 feet. George Pace and others' No. 2 Cooper, NE cor. SE SW, Section 16-2s-7w, has been abandoned at 1,857 feet.

Wagoner County

Ash Brothers' No. 1 Childers, SW cor. SE, Section 15-18-17, is drilling at 700 feet. H. D. McCracken's No. 8 Childers, CSL NE NW, Section 21-18-17, is rigging up. Midco Oil Co.'s No. 1 Drew, SE cor. SW SW, Section 15-18-17, has been completed for 750,000 feet of gas in sand at 780-86 feet.

Hughes County

Amerada Petroleum Corp. is erecting the rig for No. 1 William Deere, NW cor. SW, Section 4-8-9. Indian Territory Illuminating Oil Co. is building the rig for No. 1 Godfrey, NE cor. NW SE, Section 6-8-9.

The Prairie Oil & Gas Co.'s No. 1 Roberts, C NE NW, Section 34-9-10, has been abandoned at 3,231 feet. Bunte and others' No. 1 Buchner, NE cor. NW, Section 12-8-8, flowed 155 bbls. from sand at 3,373-82 feet. Superior Oil Corp. and Amerada Petroleum Corp.'s No. 1 Jimpoy, SW cor. SE, Section 4-8-9, was completed for 1,000,000 feet of gas in Gilcrease sand at 2,935-3,030 feet. Indian Territory Illuminating Oil Co.'s No. 3 Bingham, SW cor. SE SW, Section 8-5-8, Allen Pool, swabbed 272 bbls. from Cromwell sand at 2,687-2,725 feet.

Oklahoma County

Wirt Franklin Petroleum Corp. is building the rig for No. 2 Lowery, C E half W half NW, Section 12-11-3w, Oklahoma City Pool. Indian Territory Illuminating Oil Co. and others' No. 1 Fuzzell, SW cor. NW, Section 19-11-2w, has been shut in for 55,000,000 feet of gas at 4,022 feet.

Pontotoc County

Homaokla Oil Co. is building the rig for No. 4 Ritchie, NW cor. NE SE, Section 1-4-7. Markham & Pugh's No. 1 Wade, SE cor. NW, Section 1-4-7, is a rig under construction. Superior Oil Corp.'s No. 3 Maulden, SW cor. NW NW, Section 32-5-5, made an 80-bbl. well in Viola lime at 2,452-2,640 feet. W. R. Ramsey's No. 1 Kerr, NE cor. SE, Section 1-4-7, swabbed 38 bbls. from sand at 2,016-37 feet.

Pottawatomie County

Superior Oil Corp.'s No. 1 C. Jackson, SW cor. Section 36-8-4, is rigging up. Amerada Petroleum Corp. and Barnsdall Oil Co.'s No. 4 Wallace, SW cor. SE SW, Section 17-8-5, Maud Pool, is a cellar. Phillips Petroleum Co. and Fuhrman made location for No. 1 Raper, SW cor. SE, Section 33-8-5. Pure Oil Co. has the rig on the ground for No. 2 Tolen, SW cor. NW, Section 1-7-4, St. Louis Pool. Independent Oil & Gas Co. is building the rig for No. 2 Borrows, NW cor. Section 1-7-4.

Gypsy Oil Co. is building the rig for No. 1 Kennedy, NW cor. SW, Section 1-7-4. Phillips Petroleum Co. made location for No. 2 Martin, SE cor. NE, Section 2-7-4. Martin & Irwin's No. 2 Kelly, NE cor. Section 2-7-4, is rigging up. Carter Oil Co. made location for No. 1 Bodkin, NE cor. SE, Section 2-7-4. Darby Petroleum Co. has the cellar dug for No. 1 Nixon, SW cor. Section 9-7-4. Sinclair Oil & Gas Co.'s No. 1 Nadash, NE cor. SW NW, Section 29-7-5, has plugged back from the old depth of 4,257 feet, set whipstock at 2,805 feet, ripped casing and is drilling at 2,787 feet.

Independent Oil & Gas Co. and Twin State Oil Co.'s rig is going up for No. 1 Newell, SW cor. SE, Section 17-6-4, Asher area. Reserve Oil Co. is building the rig for No. 1 Asher Townsite C of Block C of Highland Addition, SE cor. NW SE, Section 18-6-4. Hall & Briscoe's rig is being built for No. 1 Asher Townsite, C of Block F Highland Addition, SE cor. SW SE, Section 18-6-4.

Reynolds Royalty Co. is building the rig for No. 1 Asher Townsite, C of Block 8, Highland Addition, SE cor. SW SW SE, Section 18-6-4. Texola Oil Co. is erecting the rig for No. 1 Asher Townsite, C of Block No. 52, NW cor. NE NW, Section 19-6-4. Simms Petroleum Co. has the rig up for No. 2 Laster, NE cor. Section 19-6-4. Independent Oil & Gas Co. is building the rig for No. 1 Gardiner, NE cor. SW SE, Section 19-6-4.

Tom Slick Oil Co. is putting up the rig for No. 3 Welden, SE cor. NW NW, Section 20-6-4. The rig is going up for No. 4 Bledsoe, NE cor. SW NW, Section 20-6-4. Independent Oil & Gas Co.'s No. 1 Lynch, on a 10-acre strip, SE cor. NW NW, Section 20-6-4, is rigging up. The Prairie Oil & Gas Co. is building the rig for No. 1 Bebee, NW cor. SE SE, Section 19-6-4.

Phillips Petroleum Co.'s No. 2 Keenan, SW cor. SE, Section 6-8-5, Maud Pool, is dry and abandoned at 3,285 feet. Amerada Petroleum Corp. and Marland Oil Co.'s No. 2 Calvin, SW cor. NW, Section 7-8-5, has been abandoned at 3,350 feet after plugging back from 4,446 feet. Amerada Petroleum Corp.'s No. 1 Fehlig, SW cor. NE, Section 7-8-5, made 290 bbls. from 4,306 feet. W. B. Pine's

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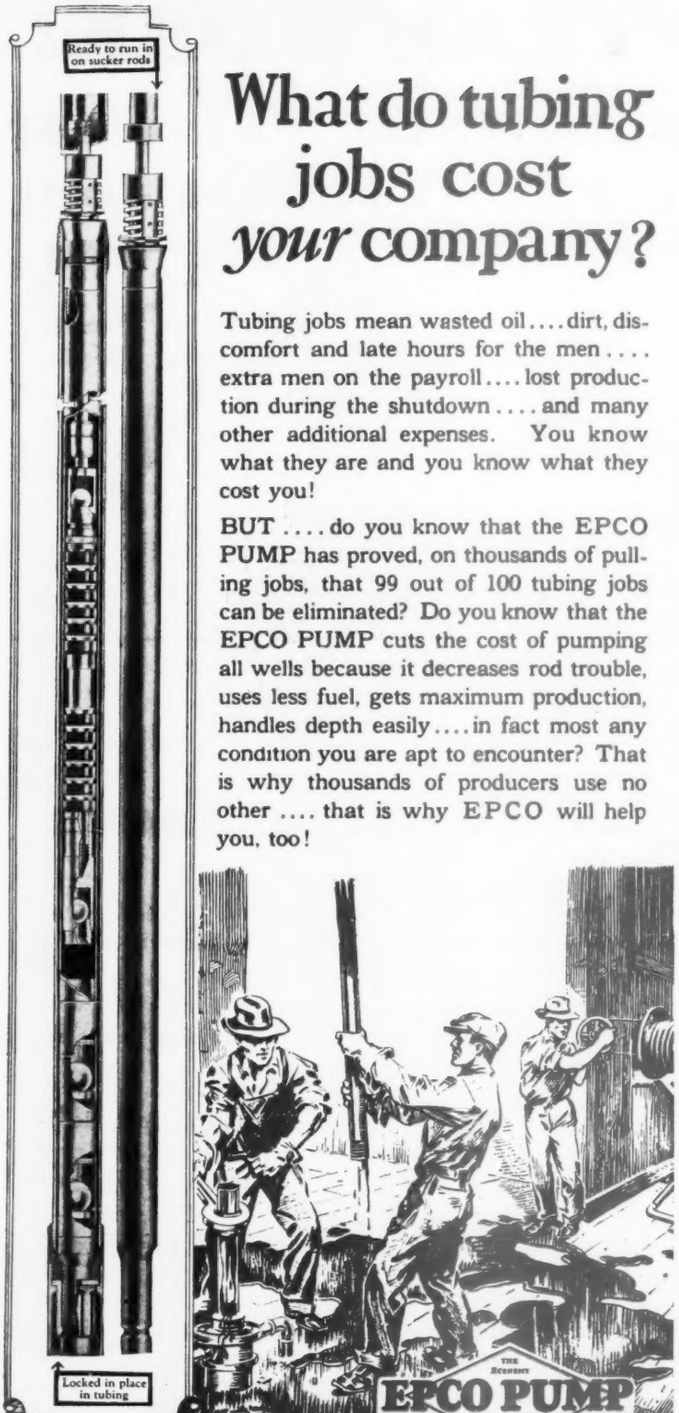

What do tubing jobs cost *your* company?

Tubing jobs mean wasted oil....dirt, discomfort and late hours for the men.... extra men on the payroll....lost production during the shutdown....and many other additional expenses. You know what they are and you know what they cost you!

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THE NATIONAL SUPPLY COMPANIES

No. 1 Smith, SW cor. NE, Section 8-8-5, was completed for 955 bbls. in Hunton lime at 4,006-41 feet.

Pure Oil Co.'s No. 1 Wallace, SW cor. NW, Section 17-8-5, is dry and abandoned at 4,530 feet in Wilcox sand. No. 2 Wallace, SE cor. SW NW, Section 17-8-5, has been abandoned at 4,079 feet in Hunton lime. Mid-Continent Petroleum Corp.'s No. 3 Shelton, SW cor. NE NE, Section 18-8-5, pumped 20 bbls. from Hunton lime at 4,096-4,109 feet. W. B. Pine's No. 2 Lingerfelt, NW cor. SW NE, Section 18-8-5, made 225 bbls. in Hunton lime at 4,140-44 feet. The Prarie Oil & Gas Co.'s No. 7 H. Campbell, SW cor. NE SW, Section 18-8-5, was completed for 560 bbls. in Hunton lime at 4,335-37 feet.

Tidal Oil Co.'s No. 2 Everetts, NE cor. SW SW, Section 18-8-5, made 345 bbls. in Hunton lime at 4,158-79 feet. Magnolia Petroleum Co.'s No. 2 Green, NW cor. NE NW, Section 20-8-5, has been completed for 491 bbls. in Hunton lime at 4,287 feet, total depth 4,323 feet, in Sylvan shale. Independent Oil & Gas Co.'s No. 3 Wallace, SW cor. Section 14-7-4, St. Louis Pool, was deepened from 4,020 feet in Hunton lime at 4,512 feet in Simpson sand and made 230 bbls. Minnehoma Oil Co.'s No. 1 Simms, NW cor. SE, Section 16-7-4, flowed 70 bbls. from Hunton lime at 3,663 feet, total depth 3,980 feet, in Sylvan. Magnolia Petroleum Co.'s No. 2 Billington, NW cor. NE, Section 22-7-4, has been shut in for 12,000,000 feet of gas in Hunton lime at 3,640-65 feet.

Gypsy Oil Co.'s No. 3 Roseman, SW cor. NW NE, Section 26-7-4, swabbed 345 bbls. from Wilcox sand at 4,228-38 feet. Carter Oil Co.'s No. 1 McGee, NE cor. SE NW, Section 26-7-4, drilled to 4,303 feet in Wilcox sand, plugged back to 4,259 feet in Simpson and made 90 bbls. Magnolia Petroleum Co.'s No. 1 M. Rowe, NW cor. NE SW, Section 18-7-5, drilled to 4,315 feet in Wilcox sand, plugged back to 4,224 feet in Simpson and swabbed 32 bbls. Sinclair Oil & Gas Co.'s No. 1 Nesbit, NE cor. SE NW, Section 18-7-5, was completed for 35 bbls. after drilling to 4,410 feet and plugging back to 4,060 feet.

Seminole County

Barnsdall Oil Co. made location for No. 1 L. Johnson, SE cor. Section 22-10-6. Gypsy Oil Co. has the rig on the ground for No. 1 M. Harjo, NW cor. NE NE, Section 20-10-7. J. S. Cosden is building the rig for No. 1 Sarber, NE cor. SW SW, Section 13-9-5, Earlsboro Pool. Sinclair Oil & Gas Co. made location for No. 1 D. Coody, NW cor. NE SW, Section 17-9-7. Magnolia Petroleum Co. moved the rig in for No. 2 Coody, NW cor. NE SE, Section 18-9-7.

Barnsdall Oil Co. has the rig on the ground for No. 9 Coker, NW cor. SW SW, Section 11-8-5, Mission Pool. The Prairie Oil & Gas Co. made location for No. 2 Stubbs, NW cor. SE NE, Section 18-9-7. Twin State Oil Co. and others' rig is on the ground for No. 1 Anderson, SE cor. SW NE, Section 22-9-5. Skelly Oil Co. and others dug cellar for No. 1 Varnum, NW cor. Section 5-9-6. Empire Oil & Refining Co. has the cellar dug for No. 11 Cluck, NW cor. SE NE, Section 11-8-5. No. 12 Cluck, SW cor. NE SE, Section 11-8-5, is also a cellar.

Harris and others' No. 1 Miller, NW cor. NE, Section 8-8-8, is drilling at 2,930 feet. Carter Oil Co. is building the rig for No. 3 L. Cudjo, SW cor. NW SE, Section 23-7-6, Little River Pool. Gypsy Oil Co. made location for No. 14 Cotcha, NE cor. NW SW, Section 23-7-6. Mid-Continent Petroleum Corp. has the cellar dug for No. 3 Eleck, NW cor. NE SE, Section 23-7-6. The Texas Company moved the rig to the location for No. 5 D. Hotulke, SE cor. SW NW, Section 23-7-6.

Sinclair Oil & Gas Co. has the rig on the ground for No. 1 Phillips. NW cor. NE SE, Section 5-7-7. Gypsy Oil Co. made location for No. 3 Payne, NW cor. SE NE, Section 5-7-7. Mid-Continent Petroleum Corp. made location for No. 8 Smith, SE cor. SW NE, Section 5-7-7. The Prairie Oil & Gas Co. and T. B. Slick made location for No. 5 Woods, NW cor. SW, Section 26-7-6.

Gypsy Oil Co.'s No. 1 Nevins, SE cor. NW SE, Section 32-10-6, Searight Pool, made 635 bbls. from Wilcox sand at 4,317-30 feet. Marland Oil Co.'s No. 1 Strothers, NW cor. SE NE, Section 5-10-7, is dry and abandoned at 4,942 feet in Wilcox sand. Gypsy Oil Co.'s No. 1 Andrews, NE cor. SE NW, Section 27-10-7, is a Wilcox sand dry hole at 4,648 feet. Burke Greis Oil Co.'s No. 3 Mayes, NE cor. Section 1-9-5, made 1,200 bbls. from Wilcox sand at 4,382-96 feet.

Carter Oil Co.'s No. 1 Community Stewart, NE cor. SE, Section 10-9-6, flowed 4,175 bbls. from Hunton lime at 3,991-4,069 feet. Twin State Oil Co.'s No. 1 Colvin, NE cor. SW, Section 7-8-5, has been deepened from 4,097 feet to 4,291 feet then plugged back to 4,288 feet and flowed 175 bbls. Magnolia Petroleum Co.'s No. 1 Hurst, SW cor. SE SE, Section 24-8-5, is dry and abandoned at 4,551 feet in Wilcox sand. The Prairie Oil & Gas Co.'s No. 5 Baker, SW cor. SE SW NE, Section 24-9-5, flowed 50 bbls. an hour from Hunton lime at 3,993-4,008 feet. No. 6 Baker, NW cor. SE NE, Section 24-9-5, came in flowing 40 bbls. an hour from Hunton lime at 4,010-12 feet.

Marland Oil Co.'s No. 4 Maines, NW cor. SE SW, Section 7-8-6, swabbed 279 bbls. from Wilcox sand at 4,263-77 feet. Carter Oil Co.'s No. 3 Fuswa, NE cor. NW, Section 18-8-6, was completed for 1,250 bbls. in Wilcox sand at 4,395-99 feet. Mid-Continent Petroleum Corp.'s No. 4 Smith, SE cor. NW NE, Section 5-7-7, made 5,835 bbls. from Wilcox sand at 4,223-35 feet. The Prairie Oil & Gas Co.'s No. 1 Coker, SW cor. Section 1-7-6, Little River Pool, made 335 bbls. in Wilcox sand at 4,204-15 feet.

The Prairie Oil & Gas Co.'s No. 3 Woods, NE cor. NW SW, Section 26-7-6, flowed 445 bbls. from Gilcrease sand at 3,234-46 feet. No. 4 Woods, NE cor. SW, Section 26-7-6, has been completed for 48,975,000 feet of gas in Gilcrease sand at 3,140-60 feet. The Prairie Oil & Gas Co. and T. B. Slick's No. 2 Cudjo, SW cor. NW NW, Section 26-7-6, has been completed for 50 bbls. an hour in Gilcrease sand at 3,150-66 feet. Producers & Refiners Corp.'s No. 2 Johnson, SE cor. SW NW, Section 24-7-6, made 900 bbls. in Wilcox sand at 4,334-45 feet.

Louisiana Oil Refining Corp.'s No. 2 Statler, SW cor. SE SW, Section 7-5-8, Allen Pool, drilled Wilcox sand at 4,311-17 feet, plugged back to 2,730 feet and pumped 40 bbls. Sunray Oil Corp.'s No. 1-A Amos, NE cor. SE SW, Section 7-5-8, is dry and abandoned at 4,270 feet in Wilcox sand. Sinclair Oil & Gas Co.'s No. 1 Nakotche, NE cor. NW SW, Section 18-5-8, is flowing 60 bbls. from 2,825 feet.

Osage County

Indian Territory Illuminating Oil Co. has the rig on the ground for No. 1, NW cor. SE, Section 16-28-8. L. G. Stanley and others are moving in a machine for No. 2, SE cor. NW NW NW, Section 15-25-8. Harland Oil Co. has a machine on the location for No. 83, NE cor. SE SW, Section 21-25-11. A. G. Oliphant and others made location for No. 3, SW cor. NW NE, Section 6-23-9.

Peters Petroleum Corp. and others' No. 1, NE cor. SW, Section 31-22-9, is a rig. Braden & Moore's No. 15, NE cor. SW SW NE, Section 12-21-8, is a machine on the ground. Clint Moore and others' No. 2, SW cor. NW NE, Section 16-21-9, is a machine rigging up. Oklahoma Power & Water Co. has the rig up for No. 117, SE cor. SW SE, Section 30-12-10. No. 119, SE cor. SW SW, Section 4-20-10, is also a machine.

Galt Brown Oil Co.'s No. 5, NW cor. SE NW, Section 7-24-8, made 90 bbls. from Skinner sand at 2,325-40 feet. A. G. Oliphant's No. 1, NE cor. Section 16-23-9, is dry and abandoned at 2,360 feet. Silurian Oil Corp.'s No. 54, SE cor. NE NW, Section 17-23-12, was completed for 35 bbls. in Bartlesville sand at 1,486-1,549 feet. A. G. Oliphant's No. 2, SW cor. SE, Section 9-21-9, is dry and abandoned at 2,370 feet. Bozo and others' No. 1, NE cor. NW NW, Section 9-20-10, is pumping 50 bbls. from Burgess sand at 2,233-2,338 feet.

Pawnee County

Peter Adamson's No. 2 Brown, SE cor. SW SE, Section 24-21-7, was deepened

Hinderliter Casing Support and Packing Head

Regulates well pressure in the process of cementing and mudding off wells of excessive volume.

Prevents the loss of oil while bringing in new wells, through pressure control.

Packing mechanism is positively accurate in operation.

Lug construction affords easy handling with casing outfits and elevator links; starts long strings of casing easily.

Eliminates dangers usually attendant upon clamps, wood blocking, bolts, nuts and other methods of anchorage.

Minimizes leakage and maintains well pressure on pumping wells.

Suspends long strings of casing at any depth.

HINDERLITER

HONEST TOOLS

ROTARY *STANDARD CABLE*

from 2,777 feet to Siliceous lime at 2,851-53 feet and made 368 bbls.

PRODUCTION OF SEMINOLE AREA

Production of pools in the Seminole area by companies and leases for May 9 follows:

Little River Pool

S.T.R.	Company, farm—	No. wells	Prod.
2-7-6	Amerada, Nitey	3	445
35-8-6	Amerada-Wilcox, Fore	2	620
23-7-6	Barnsdall, Cotcha	2	685
22-7-6	Barnsdall, Hotulke	2	100
4-7-6	Barnsdall, Walker	1	90
11-7-6	Blackwell, Baker	4	1,155
35-8-6	Blackwell, Nitey	5	275
14-7-6	Blackwell, Tally	4	855
4-7-6	Bryan-Emery-Carter, Walker	1	13
23-7-6	Carter, Cotcha	3	115
23-7-6	Carter, L. Cudjo	2	685
36-8-6	Carter, Fish	4	590
11-7-6	Carter, C. Harjo	3	2,040
13-7-6	Carter, M. Harjo	4	950
11-7-6	Carter, Jackson	4	890
24-7-6	Carter, Larney	4	1,940
10-7-6	Carter, Lena	1	670
11-7-6	Carter, Moore	2	250
14-7-6	Carter, Tewee	6	1,015
11-7-6	Carter, M. Thomas	1	330
12-7-6	Carter, Wilson	1	220
14-7-6	Champlin, Tewee	2	885
36-8-6	Continental, Cosar	7	911
25-8-6	Continental, M. Cosar	1	228
11-7-6	Continental, Milsey	2	494
34-7-6	Empire, Charty	1	55
12-7-6	Empire, Coker	2	555
27-7-6	Empire, Cotcha	1	230
3-7-6	Empire, Sandlin	1	12
33-8-6	Gypsy, C. Brown	2	367
23-8-6	Gypsy, M. Brown	1	715
36-8-6	Gypsy, Campbell	2	20
22-7-6	Gypsy, Canard	2	382
36-8-6	Gypsy, W. Cosar	2	180
23-7-6	Gypsy, Cotcha	8	4,660
11-7-6	Gypsy, Denmark	4	1,542
14-7-6	Gypsy, Hulhoke	10	1,250
1-7-6	Gypsy, Munger	1	2
5-7-7	Gypsy, Payne	1	0
35-8-6	Gypsy, Pattey	4	842
11-7-6	Gypsy, Renton	3	245
27-7-6	Independent, Carpenter	2	1,662
13-7-6	Independent, R. Davis	4	1,600
14-7-6	Independent, Tewee	6	1,170
15-7-6	Independent, Williams	1	495
22-7-6	Independent et al, Harris	8	1,676
2-7-6	Independent et al, Davis	4	460
1-7-6	I.T.I.O., Campbell	1	139
35-8-6	I.T.I.O., Dungan	3	517
1-7-6	I.T.I.O., M. A. House	1	28
1-7-6	I.T.I.O., W. E. House	1	27
2-7-6	I.T.I.O., Will House	4	904
26-8-6	I.T.I.O., Hull	3	145
1-7-6	I.T.I.O., Jackson	3	836
1-7-6	I.T.I.O., McCulla	3	765
2-7-6	I.T.I.O., Nitey	6	117
36-8-6	I.T.I.O., Phoebe A.	2	48
36-8-6	I.T.I.O., Phoebe B	3	49
1-7-6	I.T.I.O., Reed	1	7
1-7-6	I.T.I.O., Soketheche	3	397
2-7-6	Magnolia, Cruise	4	112
11-7-6	Magnolia, Denby	4	128
14-7-6	Magnolia, Harjo-A	2	75
14-7-6	Magnolia, Harjo-B	2	175
35-8-6	Magnolia, Pattey	4	140
31-8-7	Magnolia, Reed E.	1	30
22-7-6	Magnolia, Reed F. H.	3	456
4-7-7	Marland-Shaffer, Harris	1	336
4-7-7	McCullough-Sands,Harrison	1	0
11-7-6	Mid-Cont., Bruner	4	140
23-7-6	Mid-Cont., Elick	1	55
5-7-7	Mid-Cont., Smith	4	7,200
36-8-6	Mid-Cont., Wadsworth	7	300
26-8-6	Pine, Hoyecha	7	1,324
25-8-6	Pine-Phillips, Pattey	1	215
25-8-6	Prairie, Chilcoat	3	310
1-7-6	Prairie, Coker	1	265
14-7-6	Prairie, Gibson	5	1,575
14-7-6	Prairie, Harris	4	735
2-7-6	Prairie, House	4	140
24-7-6	Prairie, Johnson	2	1,440
5-7-7	Prairie, Lustey	2	80
24-7-6	Prairie, Nappin	2	180
13-7-6	Prairie, Reed	2	895
14-7-6	Prairie, Tally	4	770
15-7-6	Prairie, Williams	2	660
26-7-6	Prairie, Wood	2	525
14-7-6	Prairie-Amerada, Sunny	6	1,615
1-7-6	Prairie-Pine, Coker	1	800
26-7-6	Prairie-Slick, Cudjo	2	1,150
24-7-6	Pure, Brinson	3	1,785
23-7-6	Pure, Cotcha	10	2,266
11-7-6	Pure, Harjo	4	1,228
11-7-6	Pure, Hollins	1	132
14-7-6	Reiter-Foster, Bunyard	4	385
21-7-6	Reiter-Foster, Ritter	1	12
26-8-6	Shaffer, Narcome	2	197
11-7-6	Shell, Caesar	1	76
26-7-6	Shell, Glass	1	11
23-7-6	Shell, Hotulke	4	432
32-8-7	Shell, Jeffries	1	0
13-7-6	Shell, Johnson	4	2,248
11-7-6	Sinclair, Blandin	1	329
26-8-6	Sinclair, Cosar	3	1,180
12-7-6	Sinclair, Haney	1	35
14-7-6	Sinclair, Tewee	2	1,595
24-7-6	Sinclair-King, Pompey	1	150
14-7-6	Skelly, Carl	2	1,567
13-7-6	Snowden-McSweeney, Tiger	2	350
31-8-6	Superior, Potulka	1	0
1-7-6	Superior, Soketheche	1	3
25-8-6	Texas, Brooks	1	17
1-7-6	Texas, Coker	3	115
11-7-6	Texas, Janey	6	1,385
23-7-6	Texas-Indep., Hotulke	4	1,370
22-7-6	Texas-Indep., H. Hotulke	2	915
1-7-6	Tidal, House	2	280
1-7-6	Tidal, Jackson	1	26
25-8-6	Twin State, Lowe	1	95
	Little River total No. wells and production	333	78,461

RECAPITULATION SHEET MAY 9, 1929

Company—	Little River	Carr	Maud	Mission	Bowlegs	Earlsboro	Seminole	Searight	Total
Amerada	1,065	....	3,560	1,280	710	1,177	933	405	9,130
Atlantic	....	....	....	....	990	110	415	....	1,515
Barnsdall	875	3,967	....	....	371	7,458	1,362	30	14,053
Blackwell	2,285	....	....	....	....	....	....	....	2,285
Bryan-Emery & Carter	13	....	....	....	....	....	....	....	13
Burke-Greis	....	....	....	....	....	2,700	....	....	2,700
Carter	9,695	2,150	....	2,885	3,312	3,160	6,318	3,876	31,396
Champlin	885	....	....	....	....	....	....	....	885
Continental	1,633	....	....	....	....	610	....	....	2,243
Cosden & Co.	....	....	....	....	....	2,218	....	....	2,218
Darby	....	....	12	105	....	....	....	....	117
Dixie	....	....	....	....	68	....	....	....	68
Empire	852	4,105	....	....	485	892	312	....	6,646
Gypsy	10,205	243	835	10,462	2,384	9,422	2,628	1,249	37,418
Independent	7,063	....	185	5,674	....	2,137	1,959	....	17,018
I.T.I.O.	3,979	69	....	....	6,910	....	2,607	....	13,565
King.-Shell	....	....	....	....	....	....	498	....	498
Laurel	....	....	360	....	....	....	....	....	360
McCullough	....	....	....	....	102	....	....	....	102
Magnolia	1,116	18	553	....	2,141	7,316	260	568	11,971
McCullough-Sands	....	....	....	....	....	....	....	....	....
Marland-Shaffer	336	....	....	....	....	....	....	....	336
Marland-Shell	....	....	153	....	....	....	....	....	153
Marland	....	....	....	1,237	....	....	....	....	1,237
McMahon	....	....	....	730	....	....	....	....	730
Mid-Cont.	7,695	....	100	....	701	1,020	700	1,792	12,008
Mid-Kansas	....	....	....	35	....	35	....	....	70
Minnehoma	....	....	....	970	89	....	....	....	1,059
Pine	1,324	....	830	438	....	....	....	18	2,610
Pine-Phillips	215	....	....	....	....	....	....	....	215
Phillips	....	....	410	....	....	25	105	....	540
Prairie	9,990	2,165	170	1,776	4,987	7,206	4,550	379	31,223
Prairie-Slick	1,150	....	....	....	....	....	....	....	1,150
Pure	5,411	....	2,165	....	4,019	....	4,645	1,207	17,447
Reiter-Foster	397	....	....	....	....	....	....	....	397
Shaffer	197	....	....	925	320	155	....	....	1,597
Shell	2,767	....	....	....	55	1,365	240	208	4,635
Shell-Marland	....	....	....	555	....	....	....	....	555
Shell-Papoose	....	....	....	3,259	....	....	....	....	3,259
Sinclair	3,190	1,424	1,413	2,452	4,765	2,725	2,349	1,745	20,063
Skelly	1,567	....	....	....	....	3,041	....	....	4,608
Skelly-Atlantic	....	....	....	....	....	2,321	....	....	2,321
Skelly-Margay	....	....	295	....	....	....	....	....	295
Snowden-McSweeney	350	....	....	....	....	....	....	....	350
Superior	3	....	....	....	....	2,543	52	....	2,598
Texas	1,517	....	265	....	770	1,255	285	20	4,102
Texas-Indep.	2,285	....	....	....	....	....	....	....	2,285
Tidal	306	....	435	2,340	1,450	3,540	1,458	....	9,529
Turman	....	....	....	....	....	....	1,631	....	1,631
Twin State	95	....	300	3,115	....	94	....	125	3,729
Wilcox	....	....	1,025	....	....	....	....	222	1,247
Total production	78,461	14,131	13,056	38,228	34,629	62,524	33,307	11,844	286,180
Total wells	333	35	115	107	306	306	276	73	1,551

Carr City Pool

S.T.R.	Company, farm—	No. wells	Prod.
11-8-5	Barnsdall, Coker	6	3,640
14-8-5	Barnsdall, Fife	2	310
2-8-5	Carter, C. Coker	1	2,150
11-8-5	Empire, Cluck	7	4,105
10-8-5	Gypsy, Coker	1	225
14-8-5	Gypsy, Fife	1	18
10-8-5	I.T.I.O., Simson	1	0
10-8-5	I.T.I.O., Tully	1	69
11-8-5	Magnolia, Fee	1	18
14-8-5	Magnolia, Killingsworth	1	5
11-8-5	Prairie, Billington	7	2,165
15-8-5	Prairie, Mitchell	1	0
11-8-5	Sinclair, Bean	2	644
11-8-5	Sinclair, L. Harjo	3	780
	Carr City total No. wells and production	35	14,131

Maud Pool

S.T.R.	Company, farm—	No. wells	Prod.
1-8-4	Amerada, Ballard	1	115
7-8-5	Amerada, Felig	2	260
8-8-5	Amerada, Gossland	3	340
1-8-4	Amerada, Gravel	1	15
1-8-4	Amerada, Hallum	4	2,130
17-8-5	Amerada-Barnsdall,Wallace	3	430
20-8-5	Amerada-Hull, Green	3	270
19-8-5	Darby, Ketchum	1	12
7-8-5	Gypsy, Bourassa	4	95
18-8-5	Gypsy, Miller	8	740
18-8-5	Independent, Harding	5	185
16-8-5	I.T.I.O., State	1	0
18-8-5	Laurel, Billington	3	360
8-8-5	Magnolia, Billington	4	198
20-8-5	Magnolia, Green	1	355
18-8-5	Marland-Shell, Everett	2	153
18-8-5	Mid-Cont., Shelton	3	100
19-8-5	Phillips, Hudson	4	275
17-8-5	Phillips, Wallace	2	135
18-8-5	Pine, Lingerfelt	1	80
8-8-5	Pine, Smith	1	750
18-8-5	Prairie, Campbell	8	170
20-8-5	Prairie-White Eagle, Villines	1	0
18-8-5	Pure, Lindley	8	282
19-8-5	Pure, Urbansky	2	117
8-8-5	Pure, C. Wiley	4	1,766
19-8-5	Sinclair, Bellaire	9	885
7-8-5	Sinclair, Calvin	2	428
6-8-5	Sinclair, Lewis	2	100
18-8-5	Skelly-Margay, Lingefelt	4	295
7-8-5	Texas, Calvin	7	255
12-8-5	Tidal, Dunn	1	60
18-8-5	Tidal, Everett	2	195
8-8-5	Tidal, Smith	1	180
7-8-5	Twin State, Calvin	2	300
8-8-5	Wilcox, Smith	3	1,025
	Maud total No. wells and production	115	13,056

Mission Pool

S.T.R.	Company, farm—	No. wells	Prod.
5-8-6	Amerada, Rice	2	1,280
18-8-6	Carter, Fuswa	3	1,875
8-8-6	Carter, Micco	2	100
9-8-6	Carter et al, Melissa	1	910
1-8-5	Darby, Judy	1	105
6-8-6	Gypsy, Baby	1	10
6-8-6	Gypsy, N. Barkus	9	3,660
7-8-6	Gypsy, S. Barkus	1	302
7-8-6	Gypsy, Doser	5	1,138
7-8-6	Gypsy, Hardy	7	1,512
7-8-6	Gypsy, Harjoche	4	350
8-8-6	Gypsy, L. Micco	2	40
8-8-6	Gypsy, S. Micco	1	90
5-8-6	Gypsy, Mission	7	2,465
1-8-5	Gypsy, Mosar	3	885
1-8-5	Independent, Lawson	6	2,004
7-8-6	Indep.-Kistler, Payne	4	3,670
7-8-6	Marland, Maines	5	1,237
7-8-6	McMahor, Harjo	2	730
7-8-6	Mid-Kansas, Moore	1	35
7-8-6	Minnehoma, Neal	4	970
6-8-6	Pine, Harjo	2	408
8-8-6	Pine, Micco	1	30
7-8-6	Prairie, Crain	1	321
6-8-6	Prairie, Melton	2	1,155
5-8-6	Prairie, Micco	1	10
6-8-6	Prairie, Townsend	1	280
18-8-6	Prairie-Gypsy, Owens	1	10
12-8-5	Shaffer, Weaver	2	925
7-8-6	Shell-Marland, Herndon	1	555
7-8-6	Shell-Papoose, Maines	8	3,259
7-8-6	Sinclair, Hardy	4	2,347
1-8-5	Sinclair-Lenox, Judy	1	105
12-8-5	Tidal, Nellie	4	2,340
8-8-6	Twin State, Hayes	2	1,645
6-8-6	Twin State, Judy	2	1,025
12-8-5	Twin State, Ripley	2	445
	Mission total No. wells and production	107	38,228

Bowlegs Pool

S.T.R.	Company, farm—	No. wells	Prod.
15-8-6	Amerada, Rasco	7	710
10-8-6	Atlantic, Baker	4	305
23-8-6	Atlantic, Fleet	3	120
13-8-6	Atlantic, Grayson	4	482
16-8-6	Atlantic, A. Jones	2	21
9-8-6	Atlantic, C. Jones	1	62
28-8-6	Barnsdall, McNac	1	25
11-8-6	Barnsdall, Murrow	4	346
15-8-6	Carter, Bowlegs	4	450
23-8-6	Carter, Burden	2	205
14-8-6	Carter, Harjoche	6	545
23-8-6	Carter, Hilly	3	195
11-8-6	Carter, Jones	4	310
15-8-6	Carter, Walker	4	342
22-8-6	Carter, W. Wise	11	1,265
11-8-6	Dixie, Lizzie	1	68
14-8-6	Empire, Lacey	6	332
23-8-6	Empire, Wise	2	153
22-8-6	Gypsy, Bowlegs	1	9
9-8-6	Gypsy, Bradley	1	5
10-8-6	Gypsy, Cumsey	4	415
13-8-6	Gypsy, Grayson	4	420
10-8-6	Gypsy, Harjoche	3	417
11-8-6	Gypsy, Jones	1	0
15-8-6	Gypsy, Walker	7	962
23-8-6	Gypsy, J. Wise	2	165
24-8-6	I.T.I.O., Barnett	3	135
23-8-6	I.T.I.O., Barnett-B	1	62
22-8-6	I.T.I.O., Billington	4	290
22-8-6	I.T.I.O., Bowlegs	10	1,286
13-8-6	I.T.I.O., Davis	4	160
13-8-6	I.T.I.O., Faye	8	1,017
16-8-6	I.T.I.O., Goforth	12	1,088
16-8-6	I.T.I.O., Livingston	10	1,280
11-8-6	I.T.I.O., Lizzie	3	231
15-8-6	I.T.I.O., Walker	8	844
12-8-6	I.T.I.O., Williams	1	171
15-8-6	I.T.I.O., Wilmott	4	231
24-8-6	I.T.I.O., Work	1	41
24-8-6	I.T.I.O., Youngblood	2	74
13-8-6	Magnolia, B. F. Davis	3	461
13-8-6	Magnolia, M. Davis	1	126
10-8-6	Magnolia, Hammond	8	683
12-8-6	Magnolia, Rhoades	5	347
9-8-6	Magnolia, VanBuskirk	4	524
22-8-6	McCullough, Bowlegs	2	102
10-8-6	Mid-Cont., Baker	4	161
12-8-6	Mid-Cont., Smith	6	540
15-8-6	Minnehoma, Bowlegs	4	89
23-8-6	Prairie, Gahagan	3	360
10-8-6	Prairie, Harber	8	1,669
11-8-6	Prairie, Jones-G	4	320
3-8-6	Prairie, Jones-N	1	152
12-8-6	Prairie, Templeton	5	2,120
23-8-6	Prairie, Whitney	4	375
14-8-6	Pure, Reed	14	1,901
11&14-8-6	Pure, Strothers-D	4	382
10-8-6	Pure, Strothers-F	7	1,736
14-8-6	Shaffer, Lacey	3	320
16-8-6	Shell, Taylor	5	55
10-8-6	Sinclair, Cumsey	4	950
11-8-6	Sinclair, E. Jones	5	732
14-8-6	Sinclair, Harjo	3	845
9-8-6	Sinclair, C. Jones	7	105
10-8-6	Sinclair, M. Taylor	3	670
10-8-6	Sinclair, W. Taylor	4	531
22-8-6	Sinclair, Walker	4	932
14-8-6	Texas, Reed	11	770
13-8-6	Tidal, Grayson	4	450
10-8-6	Tidal, Harjoche	6	1,000
	Bowlegs total No. wells and production	306	34,629

Earlsboro Pool

S.T.R.	Company, farm—	No. wells	Prod.
15- 9-5	Amerada, Anderson	2	274
4- 9-5	Amerada, Cowden	7	842
3- 9-5	Amerada, Rogers	2	61
13- 9-4	Atlantic-Gypsy, Delaware	1	0
18- 9-5	Atlantic-Sinc., Foreman 2	1	110
10- 9-5	Barnsdall, L. Brown	3	1,295
2- 9-5	Barnsdall, F. Bruner	2	198
10- 9-5	Barnsdall, N. Bruner	3	289
14- 9-5	Barnsdall, Cudjo	1	28
11- 9-5	Barnsdall, D. Davis	3	433
11- 9-5	Barnsdall, J. Davis	4	1,555
11- 9-5	Barnsdall, M. Davis	2	39
9- 9-5	Barnsdall, Gibson	7	1,121
15- 9-5	Barnsdall, Hearn	1	1
1- 9-5	Barnsdall, J. Ingram	7	359
10- 9-5	Barnsdall, S. Pack	4	111
10- 9-5	Barnsdall, Peters	3	52
1- 9-5	Barnsdall, Sango	2	1,165
15- 9-5	Barnsdall, Sebolka	1	113
11- 9-5	Barnsdall, Sullivan	1	4
10- 9-5	Barnsdall,N.Sullivan Harjo	2	21
12- 9-5	Barnsdall, Wasutke	3	674
6- 9-6	Burke-Greis, Wisner	3	450
1- 9-5	Burke-Greis, Mays	3	2,250
13- 9-5	Carter, S. Davis	3	180
6- 9-6	Carter, James	3	1,530
13- 9-5	Carter et al, Gilliam	2	1,450
2- 9-5	Continental, Kays	2	49
12- 9-5	Continental, Spencer	4	561
13- 9-5	Conden & Co., Anderson	1	2,218
12- 9-5	Empire, Barker	1	40
3- 9-5	Empire, Edmondson	2	60
8- 9-5	Empire-Amerada, Bullock	1	400
13- 9-5	Empire-Marland, Anderson	1	352
10- 9-5	Gypsy, Bruner	4	2,072
11- 9-5	Gypsy, B. Carter	7	1,722
16- 9-5	Gypsy, Earl	1	18
5- 9-5	Gypsy, Hunick	2	1,757
31-10-6	Gypsy, Lottie	1	25
12- 9-5	Gypsy, Noble	4	1,012
10- 9-5	Gypsy, Peters	1	110
1- 9-5	Gypsy, Sango	13	2,454
16- 9-5	Gypsy, State	3	252
31-10-6	Independent, Alexander	1	0
10- 9-5	Independent, Bruner	3	202
10- 9-5	Independent, Sullivan	1	15
8- 9-5	Indep.-Darby, Knapp	4	1,720
11- 9-5	Indep. et al, Gaines	3	200
18- 9-6	Magnolia, Anderson	1	50
9- 9-5	Magnolia, Bryant	6	59
4- 9-5	Magnolia, Cowden	2	22
12- 9-5	Magnolia, Dixon	1	19
3- 9-5	Magnolia, Edmondson	1	4
20- 9-5	Magnolia, Germany	1	20
13- 9-5	Magnolia, Gilliam	2	4,057
11- 9-5	Magnolia, Holmesley	6	16
13- 9-5	Magnolia, Hyde	2	961
3- 9-5	Magnolia, Ingram	1	20
10- 9-5	Magnolia, Lena	3	46
24- 9-5	Magnolia, Moore	1	1,181
12- 9-5	Magnolia, Seay	9	362
10- 9-5	Magnolia, Simpson	4	344
11- 9-5	Magnolia, Sparks	6	100
12- 9-5	Magnolia, Sullivan	3	69
9- 9-5	Mid-Cont., McCumber	7	50
5- 9-5	Mid-Cont., Rogers	2	970
14- 9-5	Mid-Kansas, Anderson	1	35
14- 9-5	Phillips, Dunaway	1	23
24- 9-5	Prairie, Baker	5	2,380
13- 9-5	Prairie, Davis	3	535
3- 9-5	Prairie, C. Graham	2	5
10- 9-5	Prairie, O. Graham	4	830
6- 9-6	Prairie, James	2	15
11- 9-5	Prairie, Stidham	9	1,136
6- 9-6	Prairie-Skelly, Campbell	6	2,270
24- 9-5	Prairie-Whitney, Harjo	1	35
1- 9-5	Shaffer, Clark	3	155
17- 9-5	Shell, Bayliss	1	150
13- 9-5	Shell, Hearn	1	71
12- 9-5	Shell, Spencer	2	1,274
36-10-5	Sinclair, Alexander	2	1,155
13- 9-5	Sinclair-Atl., Foreman 1	1	15
12- 9-5	Sinclair, Hollins	1	5
24- 9-5	Sinclair, Miller	1	45
2- 9-5	Sinclair, Sango	4	1,505
1- 9-6	Skelly, Mays	4	1,280
6- 9-6	Skelly, Shepherd	4	1,625
12- 9-5	Skelly, Spencer	1	135
6- 9-6	Skelly-Atl, Cherry	4	459
6- 9-6	Skelly-Atl., Lottie	3	1,862
1- 9-5	Superior, Ingram	2	1,173

(Continued on Next Page)

T.R.	Company, farm—	No. wells	Prod.
9-5	Superior, Walker	2	1,370
9-5	Texas, Anderson	8	140
9-5	Texas, Brown	8	90
9-6	Texas, James	2	110
9-5	Texas, Rogers	5	815
9-5	Texas, Wilmott	6	100
9-5	Tidal, Walker	3	1,605
9-5	Tidal, Watkins	7	1,935
9-5	Twin State, Barker	3	34
9-5	Twin State, Hearn	2	60
	Arlsboro total No. wells and production	306	62,524

Seminole Pool

T.R.	Company, farm—	No. wells	Prod.
9-6	Amerada, Fixico	3	74
9-6	Amerada, Killing	4	398
9-6	Amerada, Rentie	3	461
9-6	Atlantic, N. Cudjo	3	415
9-6	Barnsdall, Carter	6	190
9-6	Barnsdall, Henry	2	502
9-6	Barnsdall, Jones	4	670
9-6	Carter, B. Carter	2	45
9-6	Carter, F. Carter	3	92
9-6	Carter, Creamer	1	7
9-6	Carter, R. Cudjo	4	150
9-6	Carter, W. Cudjo	1	130
9-6	Carter, Gilliland	1	140
9-6	Carter, W. E. Grisso	4	160
9-6	Carter, M. Grisso	1	200
9-6	Carter, G. F. Killing	4	35
9-6	Carter, M. Killing	12	3,705
9-6	Carter, Knapp	1	22
9-6	Carter, Lukes	5	880
9-6	Carter, Pounder	2	135
9-6	Carter, Simpson	2	140
9-6	Carter, Strothers	4	440
9-6	Carter, Vierson	2	27
9-6	Empire, Gross	2	40
9-6	Empire, Wilson	2	272
9-6	Gypsy, Butler	4	592
9-6	Gypsy, Carter	8	647
9-6	Gypsy, T. Cudjo	4	582
9-6	Gypsy, Fixico	7	55
9-6	Gypsy, Harjo	3	400
9-6	Gypsy, Wolfe	5	352
9-6	Independent, P. Fixico	3	435
9-6	Independent, Harjo	2	60
9-6	Indep. et al, Butler	3	800
9-6	Indep. et al, T. Fixico	5	314
9-6	Indep. et al, Jones	4	350
9-6	I.T.I.O., Allen	2	49
9-6	I.T.I.O., Bowlegs	12	2,168
9-6	I.T.I.O., Gooden	4	239
9-6	I.T.I.O., Harjo	3	46
9-6	I.T.I.O., James	2	107
9-6	I.T.I.O., Reed	1	8
9-6	King-Shell, Harjo	3	498
8-6	Magnolia, Cheparney	1	4
9-6	Magnolia, Franks	3	256
9-6	Mid-Cont., Rentie	9	540
9-6	Mid-Cont., Tayeche	7	160
9-6	Phillips, Strothers	2	105
9-6	Prairie, Cudjo	3	137
9-6	Prairie, Franks	6	1,175
9-6	Prairie, Giblet	3	1,400
9-6	Prairie, Gross	5	25
9-6	Prairie, Mason	1	30
9-6	Prairie, Spencer	1	6
9-6	Prairie, Strothers-A	8	1,735
8-6	Prairie, Tiger	1	42
9-6	Pure, Strothers-A	17	3,814
9-6	Pure, Strothers-B	4	566
9-6	Pure, Strothers-C	1	265
9-6	Shell, Harber	1	234
9-6	Shell, Lasley	3	6
9-6	Sinclair, J. Carter	3	25
9-6	Sinclair, Cudjo-A	6	627
9-6	Sinclair, Cudjo-B	4	807
9-6	Sinclair, Dicey	2	475
9-6	Sinc.-Trans., Fixico	4	415
9-6	Superior, Cudjo	4	52
9-6	Superior, Noble	1	0
9-6	Texas, Mayhue	1	205
8-6	Texas, Strothers	1	80
9-6	Tidal, J. Carter	4	303
9-6	Tidal, Fixico	7	1,100
9-6	Tidal, D. Harjo	1	8
9-6	Tidal, T. Harjo	3	47
9-6	Turman, Cudjo	4	440
9-6	Turman, Grisso	1	68
9-6	Turman, Jones	4	1,123
	Seminole total No. wells and production	276	33,307

Searight Pool

T.R.	Company, farm—	No. wells	Prod.
9-6	Amerada, Johnson	1	30
9-6	Amerada, Strothers	2	375
9-6	Barnsdall, Jackson	2	30
9-6	Carter, Davis	3	560
9-6	Carter, Frazier	6	870
9-6	Carter, Kiker	1	17
9-6	Carter, Mandler	2	7
10-6	Carter, Scott	1	12
9-6	Carter et al, I.T.I.O.	1	570
9-6	Carter et al, Jackson	1	0
9-6	Carter et al, Stewart	1	1,180
9-6	Carter et al, Strothers	1	660
9-6	Gypsy, Cudjo	3	352
10-6	Gypsy, Nevins	1	897
10-6	Magnolia, Varnum	2	568
10-6	Mid-Cont., Grayson	4	32
10-6	Mid-Cont., Salochie	6	765
10-6	Mid-Cont., Nevins	4	995
9-6	W. B. Pine, Pulu	1	18
10-6	Prairie, Cannon	1	3
9-6	Prairie, Carter	1	3
10-6	Prairie, Houck	1	3
10-6	Prairie, Hurford	1	290
10-6	Prairie, Kincaide	2	65
10-6	Prairie, Weimer	1	15
9-6	Pure, Aldridge	4	1,207
9-6	Shell, Strothers	4	208
9-6	Sinclair, Polly	4	1,745
9-6	Superior, Varnum	1	0
9-6	Texas, Fleet	1	20
9-6	Twin State, Varnum	2	125
9-6	Wilcox, Chupco	7	222
	Total Searight No. wells and production	73	11,844
	Grand total No. wells and production	1,551	286,180

FRACTIONAL ANALYSES OF NATURAL GASOLINE

(Continued from Page 30)

parts of the sample-introducing apparatus are connected as shown in the diagram. Stopcock K is turned to close the fractionating column A and the column is then evacuated to a low pressure. The whole analytical apparatus is prepared for analysis as usual. The gasoline bath F in the thermos bottle E is then cooled to a temperature just above the boiling point of methane (but not below) by blowing liquid air into the cooling vessel D. The temperature of the gasoline bath is measured with a triple-junction copper-constantan thermocouple which is connected to a millivoltmeter whenever a temperature reading is desired.

When the gasoline bath is cooled sufficiently, the whole train between valve N_1 and stopcock K is purged by slowly passing a few hundred cc. of gas from the gas sample container O, the rate of flow being controlled by valve N_1, stopcock K being turned to vent the train to air. Usually the sample in the gas container can be obtained under pressure and in any case water can be admitted to the container through valve N_2, as shown in diagram, to obtain pressure above atmospheric. The trap Q is intended to trap out any air bubbles in the displacing water before it reaches the gas container.

After purging, stopcock K is turned so as to allow the gas sample to slowly enter the fractionating column through the cooling tube G. The gas is precooled in the cooling tube and partially condensed before it enters the distilling bulb B of the column. The non-condensed vapor ascends to the reflux of the fractionating column (not shown) where it is further cooled and condensed to flow down the packing of the column into the distilling bulb. Any air, hydrogen, oxygen, nitrogen and carbon monoxide present in the gas sample are not condensed even at liquid air temperatures in the reflux and their accumulation in the column will gradually build up the column to atmospheric and higher pressure as indicated on the column manometer (not shown).

At this point, following the usual procedure, these non-condensed gases and most of the methane in the gas are steadily and continuously vented from the top of the column so as to keep the column pressure not greater than about 200 mm. of mercury above atmospheric. The operator will now have to balance the rate of entering the gas sample (controlled by valve N_1 and indicated by the bubbling through the caustic potash trap) against the rate of condensation in the column and the rate of venting non-condensed gases from the column, so as to maintain a fairly constant pressure in the column and train. Stopcock K may now be opened and the valve N_1 used for the sole control of the rate of entering the gas sample. The rate can be increased more and more as long as the top temperature in the column stays below the boiling point of methane indicating that no ethane-and-heavier is lost with the vent gases. It will be found that it is possible to enter as much as 40,000 cc. of gas sample in half an hour into the column with adequate cooling and without loss of ethane in the vent gas. In this way as much gas sample is passed into the column as desired.

Liquid Air Bath

The question occurs why a liquid air bath is not used for cooling the cooling tube and thus making possible even a faster rate. The difficulty with using liquid air or gasoline baths almost at the temperature of liquid air is that at these low temperatures, the methane in the gas sample is condensed in the cooling tube and has a tendency to vaporize suddenly either by "back-firing" into the warm right-hand upper arm of the cooling tube or in the bottom part of the distilling bulb (B) causing violent fluctuations in column pressure, usually blowing out the mercury in the open-arm column manometer (not shown). It is found much preferable in practice to use a gasoline bath and not to lower the bath temperature to a point at which a considerable part of the methane in the sample condenses in the cooling tube. It is not at all desirable to try to retain all or most of the methane in the condensate in the column, as it would then be necessary to distill this methane later, thus losing time.

When sufficient gas sample is passed in the column, valve N_1 is closed and mercury entered from the mercury levelling bottle L (by connecting with rubber tubing as indicated by a dashed line on the diagram) into the cooling tube thru the stopcock K. Since the cooling tube is still immersed in a bath at a temperature greatly below the freezing point of mercury, the mercury thread will be firmly frozen before it enters very far into the cooling tube. This causes no trouble, however, and establishes an initial mercury seal; the bath may now be withdrawn in one step and distillation begun as usual. From time to time more mercury may be entered into the cooling tube freezing solid each time a little farther along the tube, until eventually a mercury seal is formed to the top of the heating element, as usual, or wherever the operator prefers to have it. From this point on the analysis proceeds as usual.

In the process of passing a large volume of gas into the column and venting most of the methane (or all of the methane and most of the ethane if desired) sufficient of the pentanes-and-heavier is concentrated for close fractionation and measurement. This continuous process of gas sampling is somewhat similar to the standard charcoal test where gas is passed through activated charcoal to absorb and concentrate its gasoline content. The essential differences are to be found, of course, in the materially higher "selectivity" of the fractionating column used in the fractional distillation apparatus as compared with that of charcoal, and in the fact that only a fraction of a liquid cc. need be collected in the former method to be accurately measured. The comparatively poor selectivity of activated charcoal makes it impossible to secure sharp separation of small amounts of pentanes-and-heavier in dry gas.

Dry Gas Samples

Using sufficiently large gas samples as explained above, the same accuracy may be obtained in the determination of the dryest gas samples as with wet gases. Using the above method of introducing the gas sample, the time necessary for the introduction of even a very large dry gas sample is decreased to under an hour, and thus the time for dry gas analysis will not usually exceed the time of a wet gas analysis by much over half an hour. The fractional distillation method modified as explained above, for the analysis of dry gases has been found in the experience of numerous operators to be entirely satisfactory for the purposes to which such analyses are put.

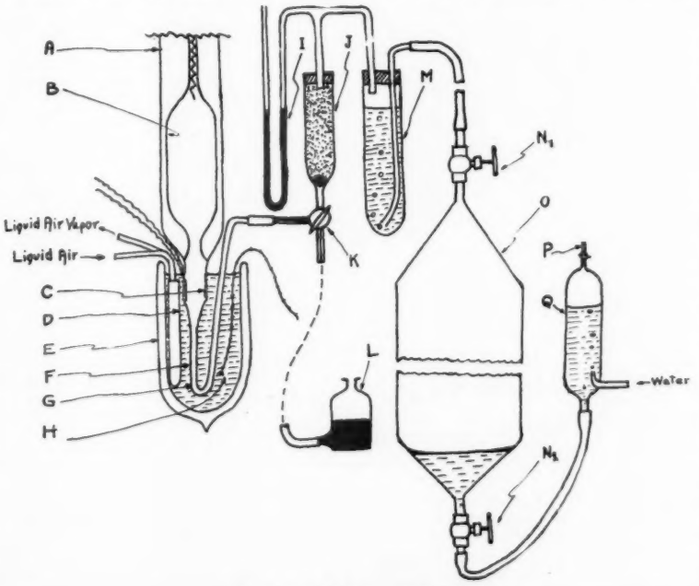


Diagram of laboratory equipment.

Diagram I, method of introducing large gas samples: A, Fractionating Column; B, Distilling Bulb; C, Heating Element; D. Liquid Air Cooling Vessel; E, Wide-Mouth Thermos Bottle Translucently Silvered; F, Gasoline Bath; G, Cooling Tube (about 3 m.m. internal diameter); H, Triple-junction Copper-Constantan Thermocouple; I, Mercury Manometer; J, Drying Tube (phosphorus pentoxide or dehydrite); K, Three-way Stopcock; L, Mercury Levelling Bottle; M, Caustic Potash Scrubbing Trap; N_1, Upper Valve on Gas Sample Container (¼" needle valve); N_2, Lower Valve on Gas Sample Container (¼" needle valve); O, Gas Sample Container (sheet-metal); P, Tap to Vent Air-Trap for Water; Q, Trap for Dissolved Air in Water.

GEORGE D. LOCKE JUST KNOWS HE LIKES OIL

(Continued from Page 33)

that number of persons were in the town for the epoch-marking event. Church bells rang, whistles blew, spectators cheered.

When the train came to a stop hundreds of the sightseers gathered about the locomotive, excitedly commenting on its wonders. There was a panic when the engineer, something of a joker, suddenly blew a long blast on the whistle. After a while, when the nervousness had died down, he shouted from his cab window: "Now look out! I'm goin' to turn 'round." The crowd fled in terror.

Railroad President Next

In 1909 Mr. Locke went to Rogers, Ark., where he became president of the Kansas City & Memphis Railway, which built 56 miles of railroad from Rogers to Siloam Springs and Fayetteville, Ark. The company owned 12,500 acres of timberland near Fayetteville and the same interests that owned the railroad organized the Ozark Land and Lumber Co. to develop this timber. At Fayetteville the railroad connected with the Frisco lines and at Siloam Springs with the Kansas City Southern.

The Kansas City & Memphis Railway sold bonds, intending to use the money obtained through them to finance the construction of a short line from Fayetteville to the timber tract. The evil genius that had been dogging Mr. Locke didn't happen to have any earthquakes or industrial panics on hand at this juncture, so it put on the world war which quickly brought about disordered business conditions that effectually prevented construction of the line to the lumber property.

Mr. Locke turned his attention again to the public utility field and organized the Rogers Light and Water Co., the Fayetteville Gas and Electric Co., the Springdale Gas and Electric Co. and the Harrison Gas and Electric Co., each operating in the Arkansas town named

For Strength and Uniformity Use

Change to the yellow triangle when fishing begins

WICKWIRE SPENCER STEEL COMPANY
41 East 42nd St., New York City

Wickwire Spencer Sales Corp.
1304 The Philtower, Tulsa, Okla.
Murray Tool and Supply Co.
Tulsa, Okla.

Acme Tool Co.
Breckenridge, Tex.

T. T. Word Supply Co.
Houston, Texas
A. F. Keck & Co.
Butler, Pa.

WICKWIRE SPENCER UNIFORM WIRE ROPE

in its title. He was president of each company, all of which were backed by the same banking interests that had found themselves unable to carry out the plans for financing the projected railroad from Fort Smith to Memphis. Mr. Locke remained at the head of these four institutions till 1917.

Gets Into the Oil Business

In that year the banking interests with which he had been associated formed the Massachusetts-Oklahoma Oil Co. to develop oil producing properties near Bigheart, Okla. Soon afterward the name was changed to Bigheart Producing & Refining Co., so that it might be significant not only of oil production but of refining operations upon which the company had entered. Mr. Locke was made vice president.

In the same year the company bought the J. S. Cosden refinery in Bigheart. It spent much money on improvements and installed a complete lubricating oil plant. Mr. Locke, who had been living in Fayetteville about two years, now moved with his family to Tulsa.

The Bigheart Producing & Refining Co. was bought by the Barnsdall Corp. in December, 1920, and three months later the Barnsdall Refining Co. was organized to operate the Bigheart plant. Mr. Locke, who had been retained as vice president, took over supervision of sales. In January, 1926, the Barnsdall Corp. bought the Waite Phillips Co., paying $25,000,000. Two other refineries were acquired and the name of the refining unit was changed to Barnsdall Refineries.

Among his other distinctions Mr. Locke possesses that of having driven into Huntsville, Ark., in December, 1910, the first automobile the town had seen. He was accompanied by R. C. Hobbs, traffic manager of the Kansas City & Memphis Railroad. The trip was made from Rogers, and all along the 35-mile route a wondering citizenry gazed wide-eyed. Horses ordinarily plodding and listless, snorted in fright and pranced sidewise as the strange machine chugged past. Several runaways narrowly were averted.

A few miles out of Huntsville a white-haired man who was riding on a farm wagon, apparently getting a lift on the way to his home on the outskirts of the town, left the wagon as the automobile stopped while the affrighted horses were quieted.

Wanted a Thrill, and Got It

"Where might you be goin'?" the patriarch inquired.

"Huntsville," responded Mr. Locke.

"Would you mind takin' me in?"

"Of course not. Climb right in, Grandpa."

Stiffly and with due caution Grandpa climbed in. As the car neared the aged man's home he asked: "Since you're goin' on into town, would you be willin' to take my old woman along, too? I'd like fer her to get a ride like this."

Mr. Locke stopped the car in front of his passenger's modest dwelling, saying: "Go ahead and get your wife. We'll be glad to give her a ride."

A few minutes later the old man returned disappointedly from the house with: "She's afeard, and since Ma won't go I reckon I' dbetter stay home. I want to tell you men that I'm 84 years old and this is the greatest day of my life."

When the motorists drove into Huntsville the village school was dismissed to enable the children to see a real automobile, such as they had read and heard about.

Since 1921 Mr. Locke's office has been in Chicago and his residence has been in Evanston, a Chicago suburb. On August 15, 1894, Mr. Locke married Miss Mabel G. Post, of Jerseyville. They have three sons, David A. Locke, in the pipe line department of the Arkansas Natural Gas Corp., El Dorado, Ark., and Lucien P. Locke and Morris R. Locke, both with the Williams & Cunningham advertising agency in Chicago. It is customary for Mr. Locke to spend about 10 days of each month in Chicago, one week in New York and one in Tulsa. The rest of the time is spent in traveling between cities.

Mr. Locke has been active in the affairs of the B. P. O. Elks and for five years, from 1916 to 1921, he served as chairman of the board of grand trustees of the grand lodge of the United States. He is vice president of the Western Petroleum Refiners Association.

MICHIGAN FIELDS

(Continued from Page 51)

Muskegon Township. A rig is being moved in for the No. 4 on the same lease. Fred J. Estes and others' No. 3 Page, NE SE Section 6-10-16, is moving in a rig.

Two new locations in Laketon Township are on the Eva D. Malone property: East Ohio Gas & Oil Co.'s Nos. 3 and 4 Malone, SW SE Section 12-10-17.

Two Muskegon Township wildcats, one in Holton and the other in Dalton Township, were dry in the Dundee. P. G. Fennell's No. 1 Herman Gustafson, SE SE Section 19-11-16, Dalton Township, was dry and abandoned at 2,300 feet. L. C. Patterson and others plugged and abandoned No. 1 Felix Monette, SE SE Section 13-12-15, Holton Township, at 2,671 feet as a duster through the Dundee.

The Eureka Oil Co.'s No. 1 Jane Featherstone had a slight show of oil in the Dundee at 2,165 to 2,170 feet; drillers were expecting to complete it as a dry hole. It is in SW SW Section 35-11-16, Dalton Township.

Western Michigan

Hopes that a new western Michigan structure had been located fell when salt water drowned a better show of oil and gas than has been encountered in any western Michigan wildcat, in the upper Traverse in the Melrose Oil & Gas Co.'s No. 1 Woodward & Hatch, at 2,415 feet. A flow of gas estimated good for 7,000,000 feet a day threw oil at the rate of about 500 bbls. a day from an 8-inch hole over the top of the derrick. Five hours later salt water ruined the well. It is being drilled to the Dundee in hopes it will make production there. It is thought it may be an edge well of a new pool.

Three new locations for wildcats in Newaygo, Oceana and Kent Counties, respectively, were announced. The Sankey Oil & Gas Co., now drilling near Hesperia, will drill a second well on the property of Frank Darlington, SW SE Section 9-14-15, Newfield Township, Oceana County.

The Hesperia Petroleum Co. will drill on the property of Walter Jones, NE SE Section 20-14-14, Denver Township, Newaygo County.

Contract for drilling a well on the Augusta Plater farm, NW SW Section 19-14-14, Denver Township, is reported to have been let.

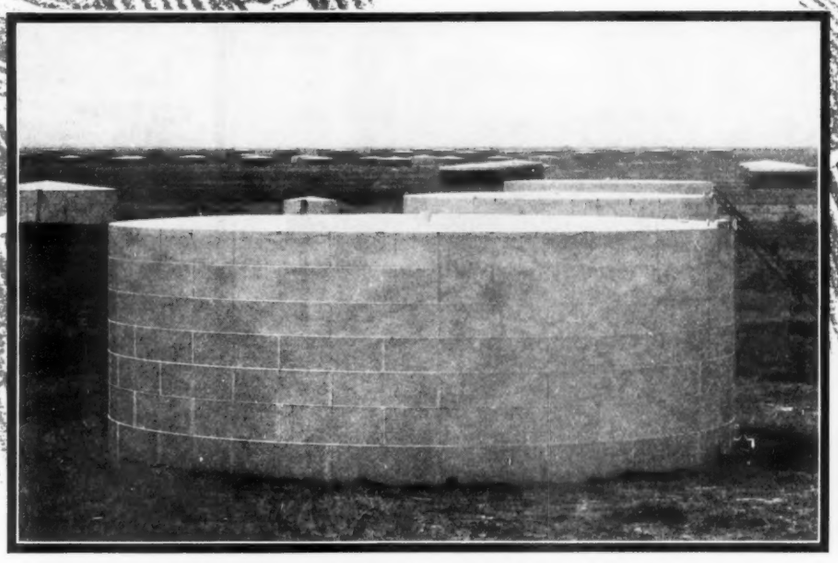
J. B. Reed is down 250 feet on No. 1 A. M. Cordes, SE SW Section 1-7-12, Walker Township, Kent County, a new test.

REVIVAL OF WORK IN ONE OF OLDEST FIELDS

PLEASANTVILLE, Pa., May. 11.—Announcement is made that Lewis E. Howard of Buffalo, N. Y., and L. W. Siggins of this village are making plans to install a $5,000 air plant on their Carsonville oil property. They have also let the contract for the drilling of four wells this spring. Several air plants are being installed in the fields in this vicinity, among them a large one on the South Penn lease.

The National Oil Co. is drilling a well on the Beebe farm, a short distance west of town. D. A. Holeman is drilling a well on his property opposite the Beebe farm.

The Bryner Brothers are planning to drill on their property at Petroleum Center. The National is also drilling on its property at Shamburg. Several people owning valuable leases are negotiating sales and as the price of oil is up with prospect of an even better price in the near future, the oil fields in this vicinity, which is the cradle of the oil industry, will be exceptionally busy this spring and summer.



Wiggins Breather Roof on 80,000-barrel tank in which oil is stored right up to the roof.

Does the sun draw on your oil?

EVAPORATION might be called the original "sight draft". No one likes to be "drawn on" — not even by our old friend, the Sun. But whether we like it or not, evaporation losses draw on the resources represented in every tank of oil.

Take, for example, a 55,000-barrel gastight welded steel roofed tank storing motor fuel gasoline. In a year's time, it will lose 800 to 925 barrels or from $3000 to $4000 worth of gasoline. A stiff draft which you can't see, but can figure pretty accurately.

It's impossible to stop the sun from drawing, but you can practically eliminate this evaporation loss by installing Wiggins Breather Roofs. They pay for themselves in a few months and last for years. Wiggins Floating Roofs are showing even larger savings.

Our nearest office will be glad to give you all information and tell you of the experiences of others.

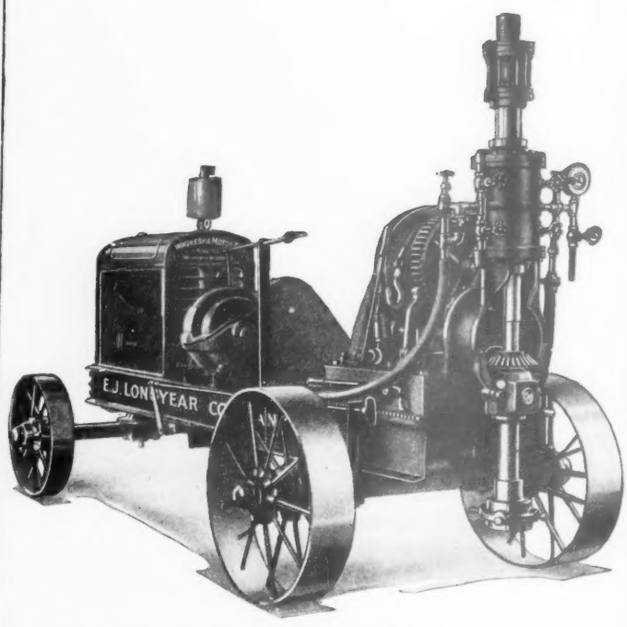
Chicago Bridge and Iron Works

Dallas	3341 Magnolia Bldg.	Detroit	1514 Lafayette Bldg.
New York	3147 Hudson Terminal	Philadelphia	1615 Jefferson Bldg.
Cleveland	2204 Union Trust Bldg.	San Francisco	1054 Rialto Bldg.
Chicago	2128 Old Colony Bldg.	Havana, Cuba	Apartado 2507

STOP EVAPORATION LOSSES

with WIGGINS BREATHER ROOFS

O&GJ 5-16 Gray



For Determining Oil Structures Economically

The Improved Longyear 2N Gas Diamond Drill

The necessities of petroleum exploration require diamond drill equipment that is not only efficient in structure drilling, but that has a high degree of mobility as well. Changes in location must be easily made and laborious set-ups avoided. The structure data obtained from diamond drill cores are exact and are obtained more easily and economically than by other methods.

The Longyear 2N Gas Diamond Core Drill pictured above has the drill, engine and pump all mounted on a steel truck. This makes a complete diamond drill unit which has every advantage of mobility and economy of operation.

A Few 2N Features

MOTIVE POWER—Waukesha 4x5 gas engine with governor which increases power under load automatically.

DRILLING MACHINE—The Longyear 2N Drill which has given satisfactory service under a variety of difficult field conditions. It is equipped with hydraulic swivel head for controlling feed while rods are rotating.

CAPACITY—Will drill 1000 feet recovering 2 in. core, or 2000 feet recovering 1-1/8 in. core.

HOIST—Smoothness is obtained by using an internal geared hoist.

DRILL SHAFT BRAKE—A precaution against the accidental dropping of drill rods has been added in the form of a brake applied automatically with the release of clutch.

PUMP—A 6x4 pump with mud valves is used, powered by the engine. It is equipped with relief and by-pass valves which give perfect control over the water circulation. The pump may be operated independently of the drill.

SHAFT CONNECTION—A flexible coupling on the shaft relieves all bearings from undue wear in case of any variation in alignment between motor and drill.

For information relative to the improved 2N Longyear Gas Drill or any other type of diamond core drill and supplies, write either the Minneapolis office or branch warehouse at Ponca City, Oklahoma.

E. J. Longyear Company
Minneapolis, Minnesota, U.S.A.

BUREAU OF MINES STATISTICS FOR MONTH OF MARCH, 192

PRODUCTION AND GRAVITY

(Barrels of 42 U. S. gallons)

	Mar., 1929 Total	Mar., 1929 Dly av.	Feb., 1929 Total	Feb., 1929 Dly av.	Mar., 1928 Total	Mar., 1928 Dly av.	A Gr.
Seminole, St. Louis, etc...	12,325,000	398,000	11,438,000	409,000	9,747,000	314,000	
					450,000	15,000	
West Texas	11,942,000	385,000	10,915,000	390,000	10,904,000	252,000	
Long Beach*	5,816,000	188,000	5,163,000	184,000	3,877,000	125,000	
Santa Fe Springs*	5,275,000	170,000	5,300,000	189,000	1,165,000	38,000	

*From American Petroleum Institute.

STOCKS AT SEMINOLE-ST. LOUIS, ETC.

(Barrels of 42 U. S. gallons)

	Mar. 31, '29	Feb. 28, '29	*Mar. 31,
Producers' stocks	548,000	493,000	386,0
Tank farm stocks	17,553,000	17,901,000	18,386,0
Total stocks	18,101,000	18,394,000	18,772,0

*Includes stocks at Seminole only.

RECORD OF WELLS, MARCH, 1929*

	Completions Oil	Gas	Dry	(†)	(‡)	
Seminole-St. Louis, etc.	118	3	13	100,300	850	
West Texas	76	1	33	199,800	2,600	
Long Beach	24	..	4	18,800	800	
Santa Fe Springs	18	..	3	35,800	2,000	

*From The Oil and Gas Journal. †Total initial production (bbls.) ‡Average initial production (bbls.) §Drilling March 31.

ANALYSIS AND DEMAND OF ALL OILS

(Including wax, coke, and asphalt in thousands of barrels of 42 U. S. gallons).

NEW SUPPLY:	March, 1929	Feb., 1929*	March, 1928	Jan.-Mar., 1929	Jan.-Ma
Domestic production:					
Crude petroleum:					
Light	73,713	67,743	65,940	216,268	191,6
Heavy	8,802	7,950	8,569	23,919	24,5
Total crude	82,515	75,693	74,509	240,187	215,6
Natural gasoline	4,324	3,736	3,471	12,043	10,3
Benzol	264	233	238	747	6
Total production	87,103	79,662	78,218	252,977	226,3
Daily average	2,810	2,845	2,523	2,811	2,4
Imports:					
Crude	6,790	7,016	6,845	21,881	19,0
Refined	1,489	908	1,135	3,281	3,3
Total new supply all oils	95,382	87,586	86,198	278,139	248,9
Daily average	3,077	3,128	2,781	3,090	2,7
Change in stocks of all oils	8,467	8,864	5,954	29,047	23,3
DEMAND:					
Total demand	86,915	78,722	80,244	249,092	225,6
Daily average	2,804	2,812	2,589	2,768	2,4
†Exports:					
Crude	1,572	1,678	1,530	5,222	4,6
Refined	10,801	9,506	11,247	32,021	32,3
Domestic demand	74,542	67,538	67,467	211,849	189,9
Daily average	2,405	2,412	2,176	2,354	2,0
Excess of daily average domestic production over domestic demand	405	433	347	457	4
STOCKS (end of month):					
Crude petroleum:					
East of California‡					
Light	327,634	325,766	318,071	327,634	318,0
Heavy	52,025	51,173	51,178	52,025	51,1
California:					
Light	24,067	21,810	19,633	24,067	19,6
§Heavy	100,504	99,284	94,484	100,504	94,4
Total crude	504,230	498,033	483,366	504,230	483,3
Natural gasoline at plants	995	821	843	995	8
Refined products	137,305	135,209	128,719	137,305	128,7
Grand total stocks all oils	642,530	634,063	612,928	642,530	612,9
¶Days' supply	229	226	237	232	2
Bunker oil (included above in domestic demand)	4,213	4,252	4,236	12,380	11,7

*Revised. †Includes shipments to Alaska, Hawaii and Porto Rico. ‡Exclusive producers' stocks. §Includes fuel oil. ¶Grand total stocks divided by daily average total demand.

COMPARATIVE ANALYSES

(Thousands of barrels of 42 U. S. gallons)

	Runs to stills Total	Runs to stills Dy.av.	Imports* Total	Imports* Dy.av.	Exports* Total	Exports* Dy.av.	Stocks end of period	Dom. demand Total	Dom. demand Dy.av.
Crude petroleum:									
March, 1929	80,708	2,603	6,790	219	1,572	51	†403,726	....	
February, 1929	72,031	2,573	7,016	251	1,678	60	†398,749	....	
Jan.-Mar., 1929	231,564	2,573	21,881	243	5,222	58	†403,726	....	
March, 1928	72,528	2,340	6,845	221	1,530	49	†388,882	....	
Jan.-Mar., 1928	208,229	2,289	19,026	209	4,005	44	†388,883	....	
	Production Total	Production Dy.av.							
Gasoline:									
March, 1929	34,467	1,112	327	11	4,798	155	47,205	28,495	9
February, 1929	31,264	1,117	406	15	3,838	137	45,704	22,776	8
Jan.-Mar., 1929	100,066	1,112	1,232	14	13,286	148	47,205	73,873	8
March, 1928	29,276	944	259	8	4,016	130	41,078	24,294	7
Jan.-Mar., 1928	84,113	924	1,193	13	11,070	122	41,078	66,474	7
Kerosene:									
March, 1929	4,515	146	5	....	1,899	61	7,855	2,976	
February, 1929	4,435	158	20	1	1,591	57	8,210	3,519	1
Jan.-Mar., 1929	13,650	152	63	1	5,408	60	7,855	9,451	1
March, 1928	4,715	152	6	....	1,852	60	7,760	2,722	
Jan.-Mar., 1928	14,522	160	63	1	5,753	63	7,760	8,787	
Gas oil and fuel oil:									
March, 1929	37,456	1,208	1,146	37	2,600	84	‡130,699	....	
February, 1929	34,331	1,226	466	17	2,795	100	‡129,402	....	
Jan.-Mar., 1929	108,625	1,207	1,947	22	9,094	101	‡130,699	....	
March, 1928	34,437	1,111	848	27	3,969	128	‡123,588	....	
Jan.-Mar., 1928	99,347	1,092	2,067	23	11,564	127	‡123,588	....	
Lubricants:									
March, 1929	2,943	95	2	....	1,045	34	8,853	1,581	
February, 1929	2,503	89	4	....	871	31	8,534	1,751	
Jan.-Mar., 1929	8,391	93	7	....	3,032	34	8,853	4,853	
March, 1928	2,878	93	....	....	837	27	8,383	1,990	
Jan.-Mar., 1928	8,260	91	....	....	2,612	29	8,383	5,125	
Wax (1,000s of lbs.):									
March, 1929	56,372	1,818	2,575	83	22,127	714	158,404	18,469	5
February, 1929	50,027	1,787	3,120	111	25,359	906	140,053	11,256	4
Jan.-Mar., 1929	165,284	1,836	8,677	96	75,551	839	158,404	50,350	5
March, 1928	50,170	1,618	1,767	57	40,147	1,295	119,522	28,747	9
Jan.-Mar., 1928	154,706	1,700	4,221	46	117,895	1,296	119,522	72,148	7

*From Bureau of Foreign and Domestic Commerce, subject to revision. Exports include shipments to Alaska, Hawaii, and Porto Rico. †Includes California light crude. ‡Includes California heavy crude and fuel oil.

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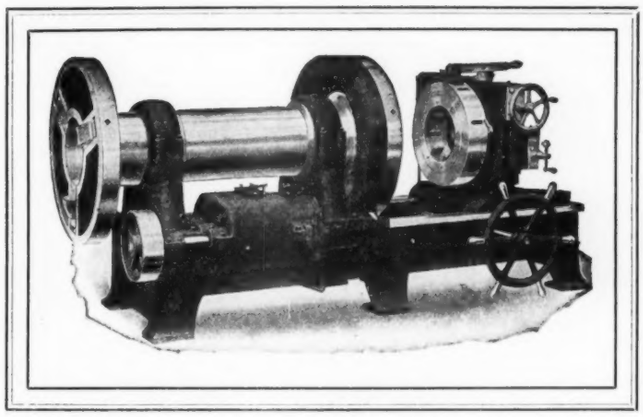
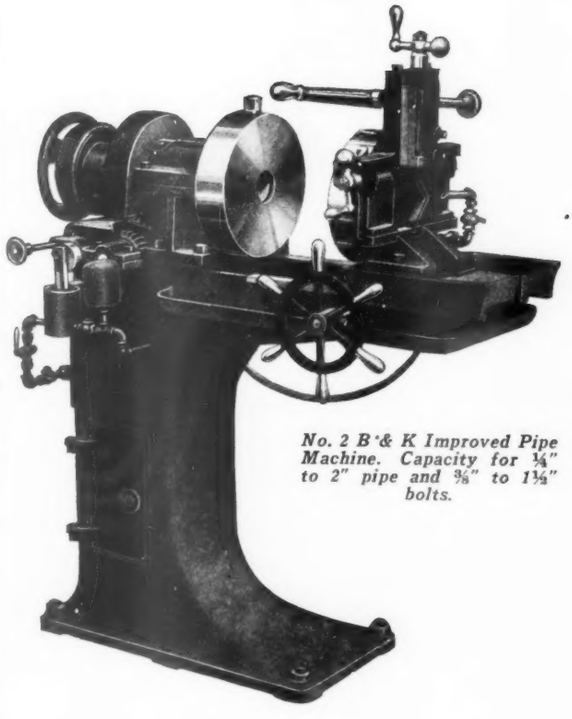


No. 10 Duplex Improved Pipe Machine with single pulley drive. Pipe capacity 3½" to 10".

ANYBODY CAN THREAD PIPE With a B & K Machine—

Big
Fast
Strong
Accurate
Dependable
Easy to Operate



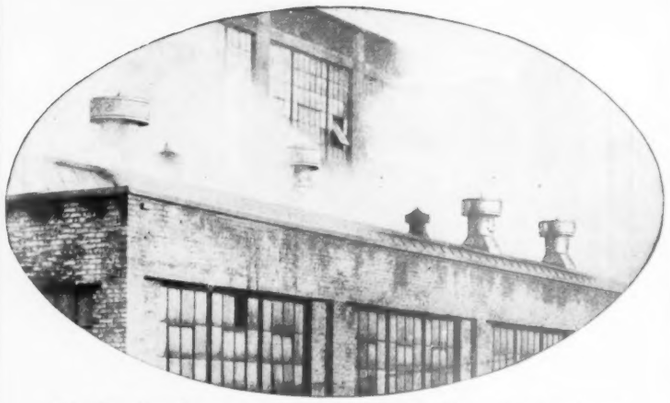
No. 2 B & K Improved Pipe Machine. Capacity for ¼" to 2" pipe and ⅜" to 1½" bolts.

Bignall & Keeler Pipe Threading Machines are so sturdy, simple and easy to operate that almost any workman can use them satisfactorily. Threads are clean-cut and well-formed, although the rate of production is high. Repairs are practically unknown and maintenance is negligible with B & K machines. You'll find them still doing excellent work after 20 or 30 years of hard service.

Over fifty years of experience are reflected in the seventeen types and sizes we make for all pipe threading requirements. Send for our latest catalog. It is free but valuable. Write now.

Bignall & Keeler Machine Works
of the N. O. Nelson Manufacturing Co.
Edwardsville, Illinois

O&GJ 5-16 Gray



Burt Fan Ventilators removing approximately 9,000 cu. ft. of moisture laden air per minute per ventilator from a tire curing plant.

Remove Those Fumes!

Up until a few years ago, the solution of the ventilating problem in the oil and gas industry resolved itself into the selection of equipment that would do MOST of the work. Many ventilators had desirable features which, if combined into one ventilator, would do a 100% job, but not one could meet every requirement. And so it was only natural that the oil and gas industry should welcome the Burt Direct Connected Fan Ventilator—the ventilator that GIVES POSITIVE RESULTS UNDER EVERY CONDITION!

There is no question as to their superiority in handling the fumes and obnoxious gases which are constant menaces to efficient working conditions in refineries, storage buildings and other units of the industry.

Each ventilator has a definite rated capacity and is constructed storm-proof with a quiet and fully enclosed motor driving a four-bladed fan at the top of the air shaft. It embodies the cone damper type of construction for three reasons which are of great importance in selecting ventilating equipment:

1. Increases the pulling power by guiding the expelled air outward and eliminating eddying currents.
2. Permits exact control of ventilation thru patented adjustment clip which instantly places the damper in any desired position.
3. Offers full protection against fire hazards when equipped with fuse link which automatically closes damper at dangerous temperatures.

It is designed to take care of ordinary conditions with the motor turned off or to take care of the most severe problems with the fan operating. Made in all standard sizes and will exhaust as high as 15,000 cu. ft. of air per minute per ventilator.

Write us today and let our engineers help you plan your ventilating equipment.

BURT
Oil Filters
Guaranteed to get results. Offered on 30 day trial.

BURT
Exhaust Heads
Protect roofs and buildings against damage of steam and oil laden vapors.

The BURT MFG. Co.
Ventilators-Oil Filters-Exhaust Heads
929 S. High St. Akron, Ohio

PRODUCTION OF CRUDE PETROLEUM BY FIELDS AND STATES WITH CLASSIFICATIONS BY GRAVITY

(Barrels of 42 U. S. gallons)

	March, 1929 Total	March, 1929 Daily Av.	February, 1929 Total	February, 1929 Daily Av.	Jan.-Mar., 1929	Jan.-Mar., 1928
FIELD:						
Appalachian	2,635,000	85,000	2,350,000	83,900	7,568,000	7,452,000
Lima-Indiana	128,000	4,100	99,000	3,500	335,000	401,000
Michigan	145,000	4,700	130,000	4,600	434,000	90,000
Ill.-S.W. Ind.	678,000	21,900	534,000	19,100	1,801,000	1,878,000
Mid-Continent	48,115,000	1,552,100	44,488,000	1,588,900	141,363,000	132,014,000
Gulf Coast	4,350,000	140,300	3,840,000	137,100	12,443,000	10,563,000
Rocky Mountain	2,139,000	69,000	1,951,000	69,700	6,231,000	7,111,000
California	24,325,000	784,700	22,301,000	796,500	70,012,000	56,184,000
Total U. S.	82,515,000	2,661,800	75,693,000	2,703,300	240,187,000	215,693,000
STATE:						
Arkansas	2,341,000	75,500	2,145,000	76,600	6,810,000	7,983,000
California	24,325,000	784,700	22,301,000	796,500	70,012,000	56,184,000
Colorado	205,000	6,600	185,000	6,600	604,000	707,000
Illinois	602,000	19,400	453,000	16,200	1,561,000	1,663,000
Indiana	82,000	2,700	85,000	3,000	254,000	237,000
Southwestern	76,000	2,500	81,000	2,900	240,000	215,000
Northeastern	6,000	200	4,000	100	14,000	22,000
Kansas	3,086,000	99,600	2,836,000	101,300	8,851,000	10,149,000
Kentucky	559,000	18,000	511,000	18,200	1,656,000	1,723,000
Louisiana	1,666,000	53,700	1,514,000	54,100	4,956,000	5,269,000
Gulf Coast	584,000	18,800	541,000	19,300	1,848,000	1,286,000
Rest of state	1,082,000	34,900	973,000	34,800	3,108,000	3,983,000
Michigan	145,000	4,700	130,000	4,600	434,000	90,000
Montana	282,000	9,100	275,000	9,800	863,000	1,076,000
New Mexico	911,000	2,900	67,000	2,400	234,000	221,000
New York	267,000	8,600	240,000	8,600	762,000	567,000
Ohio	547,000	17,600	482,000	17,200	1,561,000	1,738,000
Central and eastern	425,000	13,700	387,000	13,800	1,240,000	1,359,000
Northwestern	122,000	3,900	95,000	3,400	321,000	379,000
Oklahoma	21,133,000	681,700	20,070,000	716,800	64,087,000	60,089,000
Osage County	1,319,000	42,500	1,240,000	44,300	3,958,000	5,687,000
Rest of state	19,814,000	639,200	18,830,000	672,500	60,129,000	54,402,000
Pennsylvania	916,000	29,600	806,000	28,800	2,572,000	2,366,000
Tennessee	1,000	.....	2,000	100	5,000	11,000
Texas	24,239,000	781,900	21,763,000	777,200	69,102,000	59,087,000
Gulf Coast	3,766,000	121,500	3,299,000	117,800	10,595,000	9,277,000
Rest of state	20,473,000	660,400	18,464,000	659,400	58,507,000	49,810,000
West Virginia	467,000	15,100	404,000	14,400	1,333,000	1,426,000
Wyoming	1,561,000	50,400	1,424,000	50,900	4,530,000	5,107,000
Salt Creek	957,000	30,900	903,000	32,300	2,776,000	3,581,000
Rest of state	604,000	19,500	521,000	18,600	1,754,000	1,526,000
CLASSIFICATION BY GRAVITY (approx.):						
Light crude	73,713,000	2,377,900	*67,743,000	*2,419,400	216,268,000	191,086,000
Heavy crude	8,802,000	283,900	*7,950,000	*283,900	23,919,000	24,607,000

*Revised.

STOCKS OF CRUDE PETROLEUM HELD IN THE UNITED STATES (BBLS.)

		Mar. 31, 1929	Feb. 28, 1929	Mar. 31, 1928
AT REFINERIES (and in coastwise transit thereto) Reported by location of storage:				
East Coast:				
Domestic		9,050,000	9,129,000	8,706,000
Foreign		6,380,000	5,690,000	5,414,000
Appalachian		2,496,000	2,358,000	2,060,000
Indiana, Illinois, Kentucky, etc.		2,930,000	2,839,000	3,015,000
Oklahoma, Kansas and Missouri		5,920,000	5,982,000	5,759,000
Texas:				
Inland		1,952,000	1,855,000	1,665,000
Gulf Coast:				
Domestic		8,417,000	8,190,000	7,868,000
Foreign		392,000	273,000	383,000
Arkansas and Inland Louisiana		1,310,000	1,260,000	654,000
Louisiana Gulf Coast:				
Domestic		2,986,000	3,103,000	5,859,000
Foreign		2,316,000	1,845,000	1,080,000
Rocky Mountain		2,108,000	2,066,000	1,655,000
Total east of California		46,257,000	44,590,000	44,118,000
ELSEWHERE THAN AT REFINERIES: Domestic—Reported by field of origin:				
Appalachian:				
N. Y., Pa., W. Va., Eastern and Central Ohio	Gross	4,986,000	4,907,000	6,489,000
	Net	4,695,000	4,624,000	6,181,000
Kentucky:	Gross	944,000	962,000	1,249,000
	Net	798,000	815,000	1,121,000
Lima-Indiana:	Gross	1,177,000	1,268,000	1,390,000
	Net	994,000	1,085,000	1,210,000
Illinois-S. W. Indiana:	Gross	12,001,000	11,920,000	12,711,000
	Net	11,343,000	11,254,000	12,208,000
Mid-Continent:				
Oklahoma; Kansas; Panhandle, Central, North, and West Texas	Gross	258,714,000	257,085,000	247,366,000
	Net	246,035,000	244,863,000	234,531,000
Northern Louisiana and Arkansas	Gross	27,995,000	28,642,000	28,717,000
	Net	25,212,000	25,842,000	25,677,000
Gulf Coast:	Gross	19,902,000	18,814,000	17,153,000
	Net	19,091,000	18,344,000	16,779,000
Rocky Mountain:	Gross	24,973,000	25,153,000	27,346,000
	Net	24,942,000	25,119,000	27,304,000
TOTAL pipe-line and tank-farm stocks east of California:	Gross	350,692,000	348,751,000	342,421,000
	Net	333,110,000	331,946,000	325,011,000
Foreign crude petroleum on Atlantic Coast		59,000	83,000	75,000
Foreign crude petroleum on Gulf Coast		233,000	320,000	45,000
TOTAL refinery, pipe-line, and tank-farm stocks of domestic and foreign crude petroleum east of California		379,659,000	376,939,000	369,249,000
CLASSIFICATION BY GRAVITY (approx.):				
East of California:				
Light crude (24 degrees and above)		327,634,000	325,766,000	318,071,000
Heavy crude (below 24 degrees)		52,025,000	51,173,000	51,178,000
CALIFORNIA: Light		24,067,000	21,810,000	19,633,000
Heavy (including fuel)		100,504,000	99,284,000	94,484,000
PRODUCERS' STOCKS (not included above; approx.):				
East of California		7,550,000	7,500,000	.....
California		1,851,000	1,863,000	.....

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (Barrels)

(From Bureau of Foreign and Domestic Commerce)

	March, 1929 Total	March, 1929 Daily Av.	February, 1929 Total	February, 1929 Daily Av.	Jan.-Mar., 1929	Jan.-Mar., 1928
Imports	6,790,000	219,000	7,016,000	250,600	21,881,000	19,026,000
From Mexico	586,000	18,900	529,000	18,900	1,899,000	3,715,000
From Venezuela	4,923,000	158,800	4,791,000	171,100	15,336,000	10,742,000
From Colombia	888,000	28,600	1,378,000	49,200	3,538,000	3,839,000
From other countries	393,000	12,700	318,000	11,400	1,108,000	730,000
*Exports	1,572,000	50,700	1,678,000	59,900	5,222,000	3,999,000
Domestic crude oil:						
To Canada	1,249,000	40,300	1,354,000	48,300	4,110,000	3,161,000
To other countries	323,000	10,400	324,000	11,600	1,112,000	837,000
Foreign crude oil	.....	.....	.....	.....	.....	1,000

*No crude shipments to territories

(Continued on Next Page)

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES (Barrels)

	Mar., 1929	Feb., 1929	Jan.-Mar., 1929	Jan.-Mar., 1928
Crude oil	155,000	241,000	396,000	1,072,000
Refined products	2,085,000	2,091,000	6,338,000	4,234,000
Gasoline	1,550,000	1,735,000	5,108,000	3,132,000
Gas oil	480,000	343,000	1,157,000	661,000
Fuel oil	51,000	8,000	59,000	277,000
Lubricants	1,000	2,000	5,000	155,000
Asphalt	3,000	3,000	9,000	9,000

NUMBER OF PRODUCING OIL WELLS COMPLETED*

March, 1929	February, 1929	Jan.-Mar., 1929	Jan.-Mar., 1928
1,074	1,086	3,365	2,549

*For states east of California, from Oil and Gas Jaurnal; for California, from the American Petroleum Institute.

RUNS TO STILLS AND OUTPUT OF REFINERIES IN THE UNITED STATES, MARCH, 1929

Input—	Crude oil: Domestic	Crude oil: Foreign	Unfinished oils rerun	Natural gasoline	Total input (bbls.)
East Coast	8,283,000	5,630,000	833,000	177,000	14,923,000
Appalachian	2,767,000	.....	100,000	50,000	2,917,000
Ind., Ill., Ky., etc.	8,504,000	.....	673,000	161,000	9,338,000
Okla., Kans., Mo.	9,298,000	.....	460,000	281,000	10,039,000
Texas	17,406,000	118,000	216,000	858,000	18,598,000
Louisiana and Arkansas	6,034,000	866,000	18,000	668,000	7,586,000
Rocky Mountain	2,173,000	.....	625,000	129,000	2,927,000
California	19,629,000	.....	*357,000	†1,414,000	21,400,000
U. S. total	74,094,000	6,614,000	3,282,000	3,738,000	87,728,000
Daily average, 3/29	2,390,100	213,300	105,900	120,600	2,829,900
Daily average, 2/29	2,355,400	217,100	157,500	108,100	2,838,100
Texas Gulf Coast	12,725,000	118,000	133,000	731,000	13,707,000
Louisiana Gulf Coast	3,801,000	866,000	7,000	552,000	5,226,000

Output	Gasoline (bbls.)	Kerosene (bbls.)	Gas oil and fuel oil (bbls.)	Lubricants (bbls.)	Wax (lbs.)
East Coast	4,351,000	711,000	7,709,000	865,000	20,510,000
Appalachian	1,335,000	279,000	604,000	441,000	8,482,000
Ind., Ill., Ky., etc.	4,953,000	449,000	2,890,000	334,000	5,633,000
Okla., Kans., Mo.	5,026,000	901,000	3,151,000	226,000	4,082,000
Texas	7,341,000	851,000	7,671,000	755,000	7,201,000
Louisiana and Arkansas	2,621,000	485,000	3,047,000	81,000	6,985,000
Rocky Mountain	1,424,000	100,000	537,000	57,000	3,479,000
California	7,416,000	739,000	11,847,000	184,000	.....
U. S. total	34,467,000	4,515,000	37,456,000	2,943,000	56,372,000
Daily average, 3/29	1,111,800	145,600	1,208,300	94,900	1,818,500
Daily average, 2/29	1,116,600	158,400	1,226,100	89,400	1,786,000
Texas Gulf Coast	5,624,000	610,000	5,253,000	718,000	7,066,000
Louisiana Gulf Coast	1,962,000	434,000	1,697,000	73,000	6,985,000

	Coke (tons)	Asphalt (tons)	Other finished products (bbls.)	Unfinished products (bbls.)	Losses (bbls.)
East Coast	11,400	89,900	71,000	122,000	460,000
Appalachian	4,100	400	12,000	58,000	135,000
Ind., Ill., Ky., etc.	30,100	34,000	175,000	51,000	125,000
Okla., Kans., Mo.	28,600	1,400	62,000	61,000	430,000
Texas	33,100	16,000	7,000	845,000	859,000
Louisiana and Arkansas	12,100	38,900	197,000	690,000	170,000
Rocky Mountain	9,900	1,000	3,000	694,000	30,000
California	100	45,900	211,000	*352,000	393,000
U. S. total	129,400	227,500	738,000	2,873,000	2,602,000
Daily average, 3/29	4,170	7,340	23,800	92,700	83,900
Daily average, 2/29	4,530	7,440	22,000	81,200	73,500
Texas Gulf Coast	27,600	16,000	2,000	565,000	696,000
Louisiana Gulf Coast	12,100	35,100	182,000	548,000	54,000

Note—Wax, coke and asphalt equivalent to 279.1 pounds per barrel and 5.16 and 5.56 bbls. per ton, respectively.
*Includes 17,000 bbls. net tops rerun. †Includes 116,000 bbls. natural gasoline run through pipe lines.

GASOLINE PRODUCTION BY THE VARIOUS METHODS—MARCH, 1929 (Barrels)

	Straight-run	%	Cracked	%	Natural gasoline	%	Total
East Coast	2,510,000	58	1,664,000	38	177,000	4	4,351,000
Appalachian	861,000	64	424,000	32	50,000	4	1,335,000
Ind., Ill., Ky., etc.	2,755,000	56	2,037,000	41	161,000	3	4,953,000
Okla., Kans., Mo.	3,087,000	61	1,658,000	33	281,000	6	5,026,000
Texas	3,999,000	54	2,484,000	34	858,000	12	7,341,000
Louisiana and Arkansas	1,310,000	50	643,000	25	668,000	25	2,621,000
Rocky Mountain	682,000	48	613,000	43	129,000	9	1,424,000
California	5,125,000	69	887,000	12	*1,414,000	19	7,416,000
Total	20,329,000	59	10,400,000	30	3,738,000	11	34,467,000
Total February, 1929	18,246,000	58	9,992,000	32	3,026,000	10	31,264,000
Total Jan.-Mar., 1929	58,633,000	59	31,439,000	31	9,994,000	10	100,066,000
Gulf Coasts	3,616,000	48	2,687,000	35	1,283,000	17	7,586,000

*Includes 116,000 bbls. run through pipe lines.

STOCKS HELD BY THE REFINING COMPANIES IN THE UNITED STATES, MARCH 31, 1929

	Gasoline (bbls.)	Kerosene (bbls.)	Gas oil and fuel oil (bbls.)	Lubricants (bbls.)
East Coast	6,541,000	1,153,000	4,600,000	2,908,000
Appalachian	2,607,000	286,000	1,024,000	1,236,000
Ind., Ill., Ky., etc.	8,415,000	657,000	2,104,000	742,000
Okla., Kans., Mo.	5,849,000	595,000	4,683,000	525,000
Texas	7,308,000	1,367,000	11,338,000	2,254,000
Louisiana and Arkansas	3,119,000	697,000	5,370,000	113,000
Rocky Mountain	2,673,000	283,000	1,076,000	183,000
California	11,293,000	2,817,000	.....	892,000
U. S. total	47,205,000	7,855,000	*30,195,000	8,853,000
U. S. total, 2/28/29	45,704,000	8,210,000	*30,118,000	8,534,000
Texas Gulf Coast	6,322,000	1,274,000	8,620,000	2,189,000
Louisiana Gulf Coast	2,848,000	674,000	4,208,000	109,000

	Wax (lbs.)	Coke (tons)	Asphalt (tons)	Other finished products (bbls.)	Unfinished oil (bbls.)
East Coast	69,405,000	22,500	107,100	53,000	7,967,000
Appalachian	16,912,000	2,600	400	61,000	1,406,000
Ind., Ill., Ky., etc.	15,432,000	27,600	47,500	199,000	3,615,000
Okla., Kans., Mo.	7,932,000	67,100	2,000	52,000	2,124,000
Texas	10,008,000	147,100	8,500	15,000	10,877,000
Louisiana and Arkansas	17,715,000	55,600	32,800	98,000	2,504,000
Rocky Mountain	20,999,000	79,800	6,600	32,000	1,540,000
California	.....	100	45,200	181,000	†8,438,000
U. S. total	158,404,000	402,400	250,100	691,000	38,471,000
U. S. total, 2/28/29	140,053,000	388,100	235,600	652,000	38,170,000
Texas Gulf Coast	9,737,000	138,700	8,400	8,000	9,177,000
Louisiana Gulf Coast	17,715,000	55,500	28,500	92,000	2,096,000

*East of California. †Includes 1,676,000 bbls. tops in storage.

(Continued on Next Page)

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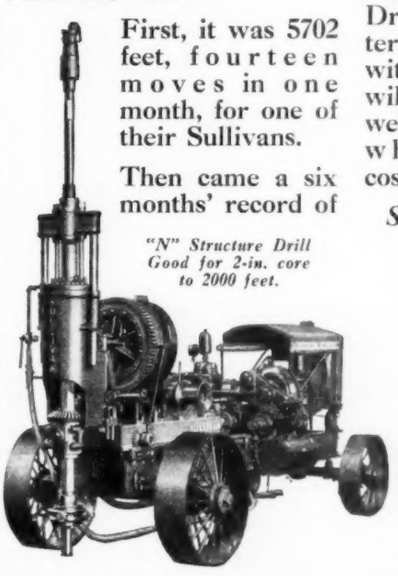

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Without tools he is nothing. With tools he is all.—

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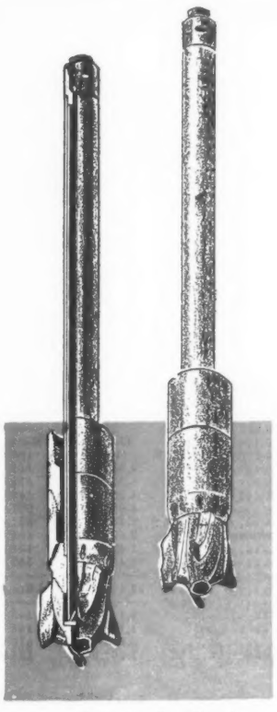
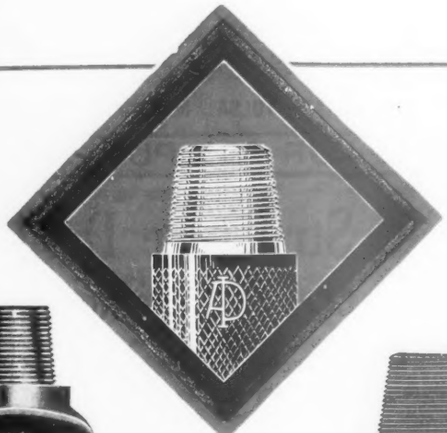


Perfection Core Barrel



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INDICATED DELIVERIES OF CRUDE PETROLEUM, EXCLUSIVE OF CALIFORNIA GRADES, TO DOMESTIC CONSUMERS (Barrels)

Domestic petroleum by fields of origin:	March, 1929 Total	March, 1929 Daily Av.	February, 1929 To al	February, 1929 Daily Av.	Jan.-Mar., 1929	Jan.-Mar., 1928
Appalachian	2,581,000	83,300	2,390,000	85,400	7,577,000	7,484,000
Lima-Indiana	219,000	7,100	129,000	4,600	503,000	325,000
Michigan	145,000	4,700	130,000	4,600	434,000	90,000
Ill. and S.W. Indiana	589,000	19,000	592,000	21,200	1,825,000	1,840,000
Mid-Continent	47,573,000	1,534,600	41,120,000	1,504,300	135,923,000	118,645,000
Gulf Coast	3,603,000	116,200	4,064,000	145,100	11,656,000	11,706,000
Rocky Mountain	2,316,000	74,700	2,080,000	74,300	6,790,000	7,045,000
Deliveries and exports	57,026,000	1,839,600	51,505,000	1,839,500	164,708,000	147,135,000
Deliveries	55,883,000	1,802,700	50,603,000	1,807,200	161,395,000	144,763,000
Foreign petroleum	6,901,000	222,600	6,949,000	248,200	21,848,000	18,989,000
Deliveries of domestic and foreign petroleum	62,784,000	2,025,300	57,552,000	2,055,400	183,243,000	163,752,000

CANADIAN FIELDS

(Continued from Page 53)

Hargal's No. 1 will spud in this month 200 feet from Home's No. 3. Hargal Oils, Ltd. holds about 3,000 acres in the Wainwright Field, but it is not known whether this acreage will be tested by Imperial or developed by Hargal. George S. Harrison, secretary-treasurer of Home Oil Co., S. W. Miller and Fred J. Whitcroft have been elected to the Hargal directorate, the latter managing director.

Nine Wells Drilling

With Royalite's No. 19 in the lime, a total of nine wells are now drilling in the Madison, including Foothills' No. 2, Home's Nos. 2 and 3, McLeod's Nos. 2 and 3, Spooner's No. 2, Illinois-Alberta's No. 2 and Calmont's No. 1.

Advance reports indicate that deliveries of crude oil and naphtha to the Regal Oil refinery for April showed a decline from March. Light crude deliveries included New McDougall-Segur Oil Co., 196 bbls.; United Oils, 799 bbls.; and crude naphtha deliveries from Spooner Oils' No. 1 totaled 608 bbls. Figures of deliveries to Imperial Oil, Ltd. are not yet tabulated, but it is stated that a daily production of 2,200 bbls. of naphtha and light crude is being pumped through the Royalite lines to Calgary.

New McDougall-Segur Oil Co.'s No. 2, LSD 14, Section 12-20-3w5, is reported to have shown an early production of 11,000,000 feet of wet gas from the deep lime, with 75 bbls. crude naphtha recovery. This is stated to be increasing, but the test may be drilled a little deeper. New McDougall-Segur's No. 1, same LSD, will be rigged up to drill to the deep lime. It has a fair light crude production in the Dakota at 3,255 feet.

Okalta Oils' No. 1, LSD 1, Section 1-20-3w5, recently brought back into production is reported flowing 300 bbls. of crude naphtha, with incomplete recovery.

McLeod Oil Co.'s No. 1, LSD 16, Section 1-20-3w5, which recently came back into production in the deep lime at 3,915 feet, making 100 bbls., had increased its flow to 135 bbls. McLeod's No. 2, same LSD, which has a small crude naphtha recovery in the lime at 4,363 feet, has started drilling to the lower horizon where McLeod's No. 4 secured production.

Illinois-Alberta Oils' No. 2, LSD 14, Section 12-20-3w5, is drilling 85 feet in the lime at 3,634 feet, with slightly increased gas production. Spooner Oils' No. 2, Section 24-20-3w5, is drilling 135 feet in the lime at 5,205 feet, and making 4,000,000 feet of wet gas. Vulcan Oils' No. 1, LSD 11, Section 13-20-3w5, is cleaning out and trying to release lost tools. It is making some crude naphtha while drilling.

Deepest Well in Canada

While the newer activity in the Turner Valley centers largely in the south end, following the spectacular results secured in Home Oil Co.'s No. 1, the north end is now getting a stronger play. This part of the field was proven in the deep lime by Foothills Oil & Gas Co.'s No. 1, SW Section 26-20-3w5, which got crude naphtha production 575 feet in the lime at 5,915 feet. This well, making a steady output around 75 bbls. a day, is the deepest producing well in Canada. A short distance northwest is Stockmen Oils' No. 1, LSD 1-2, Section 27-10-2w5, which owing to a fault failed to get the deep lime, but was finished as a gasser at 1,760 feet. Stockmen's No. 2, LSD 7, same section, shut down all winter at 2,970 feet, has been taken over and will be completed by Turner Basin Oil Co.

Freehold Oil Corp.'s No. 1, SW Section 3-21-3w5, has had a lot of bad luck, one derrick being completely and another partially burned while a crooked hole caused some delay. It is now drilling below 2,500 feet, after getting the Dakota formation around 1,900 feet, a rather high point. At this point 2,000,000 feet of gas was struck, and an additional gas flow around 5,500,000 feet at 2,540 feet depth.

Model Oils' No. 1, LSD 8, Section 22-20-3w5, has resumed drilling with a new line at 4,400 feet, where a small show of oil was struck. A 10-inch string, the longest in the field, has been run to this depth. United Oils' No. 4, LSD 2, Section 24-20-3w5, is at 5,385 feet and fishing for tools lost when the derrick burned. At this depth it has a fair show of light crude. Madison Oils, Ltd. has secured a lease adjoining the United acreage and will drill its No. 3 in LSD 7, Section 24-20-3w5. The Madison company has secured another northern lease of 40 acres, about three-quarters of a mile northeast of Freehold's No. 1, where Madison's No. 4 will be drilled. This is the only location in the Turner Valley north of the north branch of Sheep Creek, and will test the field a considerable distance northwest of the proven area. Embassy Oil & Gas Co. of Winnipeg has contracted with the Union Drilling & Development Co. for a test on acreage close to the Freehold.

Sentinel Oil Co. has arranged with Toronto interests for financing completion of its No. 1, Section 8-20-2w5, shut down at 4,650 feet. The test encountered gas flows at 1,800, 4,547 and 4,650 feet and is standing a short distance above the McDougall-Segur sand, where there is a prospect of light crude. The company holds 400 acres in this area, about 1¼ miles east of the main producing wells of the central field, and is securing additional acreage in other sections of Alberta. Officers are: President, J. F. M. Moodie; vice president, Arthur G. Graves; directors, D. J. Young, Walter G. Agnew, G. Glen Gibson.

Commonwealth Petroleums has ordered derrick timbers for a rotary test in LSD 7, Section 9-19-2w5. Alberta Pacific Consolidated Oils, Ltd., has located two tests on its acreage. No. 1 will be drilled in NE LSD 5, Section 20-19-2w5, offsetting NorthwestAssociated's No. 1. No. 2 will be drilled on the east side of the same LSD about 650 feet south of No. 1. The tests will spud in about June 1.

Sunlight Oils' No. 1 has derrick practically up in Section 4-19-5w5, to spud in about June 1. Sterling Pacific Oil Co.'s No. 1, LSD 15, Section 33-18-2w5, is working on derrick and laying a 3-inch gas line.

Structure Oil & Gas Co.'s No. 1, LSD 7, Section 31-19-2w5, west of Dalhousie's No. 5 producer, is working on derrick. Structure's No. 2 has been located in LSD 6, Section 12-20-3w5, west of McLeod's No. 3; and Structure's No. 3 will be drilled in LSDs 13-14, Section 34-18-2w5, close to the Sterling-Pacific. William Strickland, formerly of Oklahoma, has contract for No. 1.

Anaconda Oil Co.'s No. 1, LSD 16, Section 22-20-3w5, is hauling derrick timbers. Vassar Oils, Ltd., recently incorporated in Vancouver, British Columbia, will start work next month on acreage in the north.

Central Turner Valley

In the central section of the Turner Valley Field Sioux City Oil Co.'s No. 1, LSD 16, Section 1-20-3w5, is working on derrick to spud in before June. Ajax Oil & Gas Co. of Toronto which recently secured 1,500 acres in the Cypress Hills Field, is negotiating for Turner Valley acreage, and plans to start a Turner Valley test this summer. Wellington Oil & Gas Co. is working on derrick on a 10-acre tract near the Home producers. Rand Petroleum, Ltd., of Calgary is arranging to drill on a 300-acre tract in the south end. Officers are: President, J. A. Johnson; vice president, J. H. Forsey; secretary-treasurer, William Abel. Vimy Oils, Ltd., is unloading equipment at Okotoks for a test in the north end in LSD 7, Section 24-20-3w5.

Aerolite Oil Co. is getting ready to drill on the Black Diamond structure. Indian Oils, Ltd., of Vancouver, British Columbia, has derrick up on the Rickert structure.

Herron Petroleum, Ltd., has started work on its No. 1 site on the Herron structure, on the Elbow River 30 miles west of Calgary, to spud in early in June. On the Sinclair structure, Banner Oils' No. 1, LSD 6, Section 34-17-3w5, has started work.

The Morley Reserve structure near Calgary is receiving attention. Wabash Oils recently resumed drilling and at 614 feet in the lime reported some additional gas. Melbourne Oils is making new hole below 2,005 feet. with diamond drill cores showing traces of oil. Gold Coin Oils' No. 2 is reported to have spudded in. Kamorley Oils will spud in about May 20. Model Oils, Ltd., of Calgary will locate its No. 2 on a 310-acre tract in the Morley Reserve area, to spud in within a few weeks.

In the Aldersyde district, south of Calgary, Ranchmens Gas & Oil Co.'s No. 1, LSD 16, Section 13-20-29w4, is drilling in the Fernie shales at 3,258 feet with some traces of oil, but will be carried into the lime at around 3,600 feet.

Skiff Field

Dauntless Oils, Ltd., headed by O. G. Devenish, has located its No. 1 in Section 25-6-15w4. Its program calls for two tests. Treasure Oils, Ltd., of Vancouver is spotting a test in the northwest end.

In the Milk River district, Benton Oils, Ltd., headed by Charles Knight, W. McKinnon and J. and I. W. Deman has secured acreage adjacent to the Commonwealth Petroleum's holdings, and will put down a series of core drill tests preliminary to two commercial tests.

On the Beaver Dome, Madison Oils' No. 2, LSD 10, Section 24-2-11w4, has cemented off a gas flow, estimated at 5,000,000 feet a day, at 852 feet depth, and is going deeper for oil.

On the Highwood structure, southern foothills, Fay Becker, Alfred Cooper and associates of Calgary have acquired 4,000 acres close to Imperial Oil's Highwood No. 1, in Townships 16, 17 and 18, Range 3w5, and are arranging for a test.

In the Turner Valley, Merland Oil Co. has contracted with Pat Adams of Calgary to drill its No. 1 test in LSD 13, Section 27-18-2w5, test to spud in about June 10. This company is also planning to put down a test on the Chin Coulee structure near the international boundary, commercial production being looked for in the Ellis sand at 3,000 feet. Officers include: President, Col. J. B. Fell, Vancouver, British Columbia; vice president, F. D. Lundy, Vancouver; secretary, P. J. Perry; managing director, Alfred Hinds; directors, A. H. Douglas and R. R. Lamb, Vancouver; George Tull and Frank Henderson, Calgary.

Medicine Hat Petroleum Co. of Medicine Hat, Alberta, is arranging to resume work on its test near Bull's Head, shut down at 550 feet. In addition to 6,230 acres in this district, the company holds 320 acres on the Quarantine Reserve near Coutts, 320 acres in Milk River district, 320 acres in Pakowki Lake district and 80 acres at Many Island Lake. The Bull's Head test started with a 20-inch hole and 15½-inch casing is set at 450 feet.

Oil Land to Be Leased

A large acreage of oil land heretofore withheld from leasing under the Dominion Forest Reserves regulations will henceforth be open to filing. The reserves, in alternate blocks, were created by former government ruling regarding forestry reserves. Only alternate leases were granted, and as a result the reserve areas

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Nothing like knowing *real facts.* To determine drilling costs, with various tools, the Reese Drilling Company made one well in Seminole with rock cones. The bit cost was a fraction over $6,000.00 and it required 48 drilling days.

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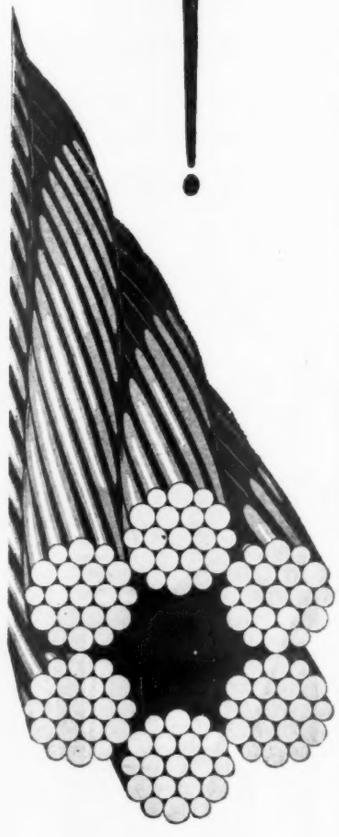

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are checkerbourded by the government and private leases. The government, believing its reserves will suffer depletion of oil and gas if wells are drilled on the acreage under lease, has decided to throw the entire area open. Leases will be granted subject to 12½ per cent royalty on production, preference being given to holders of leases adjacent to the areas now thrown open.

A new area south and west of Turner Valley was recently the subject of extensive filings, some 10,000 acres being leased in three days. The structure is in Townships 16, 17 and 18, Range 4w5, and lies principally between Pekisko Creek and Trapp Creek, and is thought by some geologists to be an extension of the Waite Valley structure. In the Wainwright Field, east-central Alberta Wainwell's No. 4, a few hundred feet from No. 2, has spudded in with rotary outfit.

Sasko-Wainwright Oil & Gas Co.'s No. 1 is delivering steady production to the Associated Refineries at Wainwright. Tests of the crude show it to be around 21, with 9.4 per cent gasoline. The refinery plant is running with a daily output of 150 bbls. of refined products. Wainwright Petroleums' No. 1, LSD 6, Section 30-45-6w4, is rigging up to spud in this month. Nos. 2 and 3 will be drilled as soon as No. 1 is finished.

Trafalgar Oil Co. is arranging to test a 520-acre tract and planning three wells, the first in Section 10-45-6w4.

In the same field, Onalta Oils, Ltd., recently organized under Dominion charter, has taken over approximately 25,000 acres of the Western Consolidated holdings and will drill on a one-eighth royalty basis. The acreage is understood to include Western Consolidated's unfinished No. 1, LSD 8, Section 29-45-6w4, shut down at 1,340 feet, and which will resume this month. The contract calls for a series of 25 wells in rotation. It is reported that Von Weymarn Oils, Ltd., has secured 2,700 acres from Western Consolidated for deep test. Toronto-Wainwright Oils, Ltd., is planning to drill two tests, No. 1 being tentatively located in LSD 6, Section 29-45-6w4.

British Columbia

Developments on the western side of the Rocky Mountains in Alberta have stimulated interest in the oil possibilities of British Columbia. There are four localities in British Columbia where, according to the geologists, petroleum production is possible. These are the southern coast area, Queen Charlotte Islands, the Flathead Valley and the Peace River block. Natural gas has been discovered on Vancouver Island, where the Nanaimo series is considered a possible source of oil. There is considerable evidence of seepage oil on the gulf islands. Some years ago considerable drilling was carried on in the Fraser delta, some oil showings and a small gas production being encountered. The most encouraging indications so far have been in the Flathead district, where B. C. Oil & Coal Development Co. and Glacier Oil Co. are both drilling. Light crude similar to the Turner Valley product has been encountered at several horizons in this area.

In the Ontario fields, Union Natural Gas Co. is starting a new test for gas in Dawn Township, Lambton County. Union Natural Gas Co.'s new test for gas in the Tilbury Field near Coatsworth is drilling around 1,000 feet. In Dover Township, Kent County, drilling has been halted by flooded conditions, and the entire gas supply from the field is shut off.

The April output for Turner Valley set a new record with a total of 69,207 bbls. The former record figure, in March, was 56,701 bbls. Home Oil Co.'s No. 1 has definitely established itself as the largest individual producer in the Turner Valley, making 20,921 bbls. of crude naphtha in April, or a daily average of 697 bbls., with an additional production for the month of 268 bbls. of light crude oil.

Calmont Oils' No. 1, LSD 2, Section 1-20-3w5, has blown into big production in the deep lime around 5,656 feet. The separator is unable to handle the entire naphtha production, which is flowing over the ground, and the well looks like one of the biggest producers in the field.

LA.-ARK. WILDCATS

(Continued from Page 46)

for months without any progress being shown have been dropped from the list. Big Ben Oil Co.'s No. 1 Stewart, Section 15-18-12, Bossier Parish, was abandoned at 1,300 feet where it had stood since October. Crawford and others' No. 1 Cashion, Section 14-18-2w, Chicot County, Arkansas, had been standing with stuck drill stem since December and was abandoned as a junked hole, total depth 2,330 feet. Smith and others' No. 1 Myer, Section 14-19-2, Chicot County, had not turned a wheel since September and was abandoned at 910 feet.

Other Completions

Other completions outside of proven territory were: The Texas Company's No. 2 School fee, Section 16-15-12, Caspiana district of southeastern Caddo Parish, dry at 859 feet. Woodley & Collins' No. 1 Harp, Section 22-22-7, Morehouse Parish, which was the occasion of a flurry three or four weeks ago, was abandoned as a salt water hole at 3,065 feet after deepening from 3,006 feet where it shut down. It had 1,000,000 feet of gas with salt water at 2,768 feet and 13 feet of white sand at 2,864 feet, red shale at 2,874 feet and volcanic ash and hard sand at 2,938 feet.

R. L. Gay abandoned No. 1 Sabine Lumber Co., Section 13-7-14, Sabine Parish, as a dry hole at 2,936 feet. East of the discovery well in the Zwolle district, it had not had a show of anything. J. G. Marcum, trustee, abandoned No. 1 DeYampert, Section 5-19-4, Ashley County, Arkansas, as a dry hole at 3,312 feet. This well also caused some excitement when it reported a slight show of oil at 3,156-59 feet and again at 3,238-41 feet.

J. W. Olvey abandoned No. 1 Cottrell, Section 22-19-17, Union County, as a dry hole at contract depth, 3,500 feet. W. M. Coats' No. 1 McDuffie, Section 32-19-17, Union County, is arranging to make a drill stem test of sand at 2,110-12 feet. Root Refineries has taken over the J. O. Moore, trustee's, No. 1 Union Sawmill, Section 11-18-12, Union County, drilling at 2,944 feet, and will make a red beds test of it.

Atlantic Oil Refining Co. lost one joint of drill stem, collar and bit at 2,790 feet in No. 1 Young, a unit plan test with four other major companies in Section 20-15-7, Ashley County (formerly reported as No. 1 Bledsoe) and whipstocked at 2,200 feet. T. J. Bush and others of El Dorado, who recently completed a dry hole in Section 11-17-18, Union County, have moved across the line into Columbia County and have derrick up for No. 1 Jones in the center of the NE NE Section 5-17-18, which is on the same block.

Hawthorne Oil Co.'s No. 1 Smith, Section 6-16-17, Union County, south of the Mount Holly production in Ouachita County, is drilling at 3,210 feet, having found nothing to warrant a test. In Lafayette County a block of indeterminate size is being built by interests operating at Bradley, the location of the block centering around the corner of Townships 18 and 19, Ranges 24 and 25, and in Sebastian County (Fort Smith district.) Tulsa interests are blocking 4 miles northwest of Greenwood, the center of the county, and southwest of Fort Smith.

Lion Oil Refining Co. has made location for another test in the Champagnolle extension area, No. 1 El Dorado Realty Co. in the NW cor. SE SE Section 7-17-13, about a mile east of production and a quarter mile south of a couple of dry holes. Magna Production Co.'s No. 2-B El Dorado Realty Co. in the same section, cemented 8⅝-inch at 3,072 feet, total depth 3,088 feet. Lion's No. 1 Stowe in Section 4-17-13, 3 miles east of production, tested salt water at 3,102 feet and is coring around 3,150 feet. The show was the second of the sort the well has obtained and the depth is below that of production to the west.

Northwest of Richland

Austin & McDonald, drilling two wildcats a short distance northwest of production in the Richland gas field with locations for two more, made their first test this week, getting a small show of gas at 2,440 feet in No. 2 Millsaps, Section 17-16-6, and are going deeper. Northern Louisiana Natural Gas Co. made location south of this well for No. 1 Binion in the SW SE Section 20-17-6, and Palmer Corp. made location for No. 1 Wolf in the NE Section 34-17-6, a semi-wildcat in vacant territory between production north and south. Northern Louisiana company cemented 6-inch at 2,310 feet on No. 1 Hemler in Section 11-16-6, another wildcat 2 miles east of production in vacant territory between producing wells on the north and south.

Ruston Drilling Co. has begun making hole on No. 1 West Virginia, Section 23-15-7, Franklin Parish; set 12½-inch at 152 feet, total depth 350 feet. George O. Baird has rig up for No. 1 Tremont in Section 24-16-1w, Jackson County, and The Texas Company's No. 1 Fuller in Section 9-21-2w, Union Parish, is at the same stage and will probably be drilling by the middle of the week. V. E. Shaw is arranging for another drill stem test at 2,740 feet on No. 1 Voss, Section 1-20-3, Lincoln Parish, which was dry on similar test 8 feet higher up. J. E. Cammatte is arranging to drill plug and bail No. 2 Tugwell, Section 21-22-1e, in the Farmerville district of Union Parish in which he claimed a show at 1,848 feet and set 6⅝-inch at 2,841 feet.

Benedum & Trees, who have been drilling north of the old Naborton district of DeSoto Parish, have gone across the river into Red River Parish and plan tests on a block of 6,000 acres centering on Section 29-11-9, in which location for the first has been made in the northwest corner. Location is 7 miles south of Coushatta and considerably south of production in the Bull Bayou district.

H. D. McRitchie and others' No. 1 Mason in the Merriwether Survey of Harrison County, Texas, tested dry in 13 feet of sand (Nacatoch), total depth 916 feet, after setting 8¼-inch at 876 feet. The well is said to be checking about 50 feet high and is located about 7 miles north of Waskom.

NORTH LOUISIANA

Bienville Parish

W. G. Gray has started work on No. 1 Snyder, in Section 15-16-6, town of Bienville, and set 300 feet of 10-inch.

Bossier Parish

Triangle Drilling Co. is down 500 feet on No. 1 Fullilove, Section 11-17-12.

Caddo Parish

R. W. Norton is drilling red shale at 3,575 feet on No. 1 Fortner, a joint test with Humble Oil & Refining Co. in Section 32-21-16.

DeSoto Parish

P. J. Becker junked No. 1 Tull, Section 23-12-15, at 1,360 feet, skidded 20 feet south and is drilling around 200 feet on second hole. Magnolia Petroleum Co.'s No. 1 Clements, Section 28-12-11, is in gumbo at 1,725 feet.

Franklin Parish

Ruston Drilling Co. set 152 feet of 12-inch surface pipe and is drilling No. 1 West Virginia Timber Co., Section 23-15-7, at 400 feet.

Grant Parish

Carter & Collins shut down No. 1 Hardner & Tannehill, Section 9-6-1w, at 2,809 feet.

Lincoln Parish

V. E. Shaw and others are arranging for a second drill stem test on No. 1 Voss, Section 1-20-3, at 2,740 feet, the first at 2,752 feet being dry.

Monroe District

Ouachita Parish—Farish and Russell cemented 6-inch at 3,600 feet on No. 1 School, Section 16-16-4.

Union Parish—J. E. Cammatte is arranging to test No. 2 Tugwell, Section 21-22-1e, at 2,848 feet with casing cemented at 1,841 feet. The Texas Company has rig up to drill No. 1 Fuller, Section 9-21-2w.

Natchitoches Parish

Robeline Oil & Gas Co.'s No. 1 Cassa-

dy, Section 7-8-9, is drilling hard brown lime at 3,140 feet.

Red River Parish

Eylers Oil Co. is drilling shale at 1,043 feet on No. 1 Chaffraix, Section 30-12-10.

Richland Parish

Austin & McDonald's No. 2 Millsaps, Section 17-17-6, tested a small show of gas at 2,440 feet but will go deeper. Northern Louisiana Natural Gas Co. made location for No. 1 Boykin, 990 feet east and 660 feet north SW cor. SE Section 20-17-6. No. 1 Helmer, Section 11-16-6, cemented 6-inch at 2,315 feet.

Sabine Parish

R. L. Gay's No. 2 Bowman-Hicks, Section 14-7-14, developed a show of oil at 3,569 feet in sandy shale but on drill stem test it developed salt water; No. 3 in the same section is flowing 15 bbls. through tubing from broken formation at 2,140-78 feet which caved and filled the hole below the liner which stuck off bottom; No. 1 Long-Bell, Section 26-8-14, is drilling at 600 feet. A H. Tarver is drilling at 2,070 feet on No. 1 Long-Bell, Section 29-8-13.

EAST TEXAS

Shelby County

Gulf Refining Co. cored gray lime and streaks of blue shale in No. 1 Carraway, J. H. Patterson Survey, from 4,324-27 feet.

ARKANSAS

Bradley County

Ohio Oil Co.'s No. 2 Southern Lumber Co., Section 19-16-9, is coring at 3,310 feet. Phillips Petroleum Co. has rig up to drill No. 1 Kline, Section 28-16-12, a unit test with several other major companies.

Columbia County

T. J. Bush and others of El Dorado made location in the center of NE NE Section 5-17-18, for No. 1 Jones. Helena Oil & Gas Co., claiming a show at 2,600 feet on No. 1 Pickler, Section 19-19-22, and arranging for a drill stem test, made no test but is in lime at 2,580 feet, steel line measure.

Drew County

Ohio Oil Co.'s No. 1 Jerome, Section 13-15-4, is drilling at 3,700 feet.

Logan County

Arkansas Natural Gas Corp. is fishing for bailer on No. 1 Hanna, Section 25-7-23, total depth 2,385 feet.

Madison County

Independent Oil & Gas Co.'s No. 1 Banks, Section 6-16-27, is drilling hard lime at 1,550 feet.

Ouachita County

Arkansas Drilling Co.'s No. 1 Crowley, Section 27-15-18, is down around 200 feet. Louisiana Oil Refining Corp. is drilling at 4,308 feet on No. 1 Manly, Section 15-15-19. Timberlake and others' No. 1 Wright, Section 25-14-18, is drilling at 2,270 feet. Wesson and others are shut down at 2,203 feet on No. 1 Booth, Section 12-15-19.

Union County

W. M. Coats and others' No. 1 McDuffie, Section 32-19-17, is coring at 1,020 feet. Hawthorne Oil Co.'s No. 1 Smith, Section 8-16-17, is drilling at 3,210 feet. Lion Oil Refining Corp.'s No. 1 Stowe, Section 4-17-13, tested salt water at 3,102 feet and is coring at 3,141 feet. J. O. Moore is drilling No. 1 Union Sawmill, Section 11-18-12, at 2,944 Section 29-16-17, is drilling at 3,450 feet.

Washington County

C. H. Willoughby's No. 1 Jones, Section 34-16-30, is drilling brown lime at feet. Sundby and others' No. 1 Yocum, 1,350 feet. Lincoln Lease Holding Co.'s No. 1 Lincoln, Section 30-15-32, is drilling lime at 475 feet.

LOUISIANA-ARKANSAS

(Continued from Page 46)

No. 1-B Muslow, Section 29-20-15, has 13 feet of broken sand, total depth 2,302 feet, and is waiting on standard rig to pump.

Oil City—Gulf Refining Co. has derrick up for No. 16-A Levee Board, 726 feet south and 233 feet east NW cor. NE Section 34-21-16. Magnolia Petroleum Co.'s No. 18 Doan-Thigpen, Section 6-20-15, is in lime at 2,976 feet. C. M. Moore is drilling No. 5 Dillon, Section 22-20-15, at 700 feet. Simplex Oil Co. is bailing No. 7 Youree-Randolph, Section 13-20-15, to test at 2,300 feet. total depth 2,326 feet.

Pine Island—Dixie Oil Co. cemented 4¾-inch casing at 6,104 feet on No. 92 Dillon, Section 13-21-15, total depth 6,124 feet; No. 97 Dillon in the same section is waiting on standard rig to pump from 1,753 feet; No. 3-B Slattery, Section 21-21-15, set 40 feet of 10-inch and is drilling at 250 feet.

LaSalle Parish

Urania—Arkansas Natural Gas Corp. set 104 feet of 10-inch on No. 12-B Urania, Section 17-10-2e. Philp and others have derrick up for No. 1 Urania, 250 feet north and 150 feet west SE cor. NE NE Section 1-10-1e. G. W. Zoder cemented 6-inch at 1,512 feet to test sand from 1,513-17 feet on No. 2 King, Section 13-10-1e.

Monroe District

Morehouse Parish—J. S. Herkness is fishing for drill stem on No. 5 Bowles, Section 17-20-5, total depth 2,246 feet. Natural Gas Producing Co. cemented 6-inch at 2,175 feet on No. 24 Crossett, Section 25-21-4, and at 2,124 feet on No. 14 Tensas, Section 4-22-4. Southern Carbon Co.'s No. 2 Griffing, Section 10-24-4, is drilling at 1,200 feet and has rig up for No. 10 Tensas, 1,980 feet north and 1,320 feet east SW cor. Section 2-20-4.

Ouachita Parish—Interstate Natural Gas Co. cemented 6-inch at 2,148 feet on No. 3 Hunter & McCormick, Section 41-19-3, and at 2,115 feet on No. 4 in Section 1-19-3, and 12½-inch at 192 feet and 8-inch at 849 feet on No. 5 in Section 40-20-3. G. E. Jordan set 8-inch at 886 feet on No. 1 Anding, Section 18-18-5. LaDel Oil Properties cemented 6-inch at 2,145 feet on No. 47 fee, Section 6-19-5, and has rig up for No. 48 in Section 31-20-5. Magnolia Petroleum Co.'s No. 2 U. S., Section 30-19-5, is drilling at 2,000 feet and No. 3 in Section 18-19-5, at 1,975 feet. Peerless Carbon Co. set 12-inch at 185 feet and 8-inch at 812 feet on No. 5 Moore, Section 51-20-4. Pioneer Oil & Gas Co.'s No. 1 Fudicker, Section 18-18-5, is shut down at 2,000 feet. United Oil & Gas Co. has rig up for No. 4 Guthrie in Section 49-20-4.

Union Parish—Natural Gas Producing Co.'s No. 2 Hale, Section 14-21-3, is down around 200 feet.

Red River Parish

Gulf Refining Co. has derrick up for No. 24 Kennedy in Section 24-13-11; No. 38 Robinson, Section 25-13-11, cemented 6⅝-inch at 2,488 feet, total depth 2,496 feet.

Richland Parish

S. R. Humble set 12-inch at 205 feet on No. 1 Etheridge, Section 28-17-16, and 8-inch at 931 feet. Palmer Corp. made location 1,980 feet north of the center of Section 34-17-6 for No. 1 Wolf. Richland Producing Co. cemented 6-inch at 2,350 feet on No. 1 Hemler, Section 2-16-6. Southern Carbon Co.'s No. 1 Tegola, Section 4-15-6, cemented 8-inch at 808 feet.

Sabine Parish

Pleasant Hill—Arkansas Natural Gas Corp. is drilling No. 13 Logan, Section 33-10-12, at 3,150 feet.

Webster Parish

Cotton Valley—Louisiana Oil Refining Corp. is drilling anhydrite at 4,467 feet on No. 6 Gray, Section 28-21-10, and No. 3 Nelson in the same section is in shale at 4,102 feet. Magnolia Petroleum Co. cored shale and pyrites at 4,545 feet on No. 4 Ira Cox, Section 23-21-10; No. 6 Marshall, Section 21-21-10, cored sand at 4,645 feet; No. 1 McCook & Hibbler, Section 22-21-10, cored shale at 5,270 feet.

Sarepta-Shongaloo—Pat Hudson's No. 1 Slack, Section 1-22-11, is shut down on account of litigation, total depth 2,592 feet. Magnolia Petroleum Co. cored shale with streaks of oil sand, total depth 2,662 feet; No. 1 Cook, Section 2-22-11, is coring shale at 3,661 feet.

EAST TEXAS

Harrison County

Eureka Natural Gas Co. is setting 2½-inch tubing with packer on No. 1 Cox-Timmons, R. W. Bedford Survey, total depth 2,345 feet; H. D. McRitchie and others' No. 1 Crofts, F. L. Merriwether Survey, set 8-inch at 876 feet to test the Nacatoch, total depth 900 feet.

Panola County

Adams & Walker are drilling at 2,220 feet on No. 5 Adams in the James Matthews Survey. Calatex Oil & Gas Co.'s No. 4 Agurs, J. Womack Survey, is drilling at 2,200 feet. Eureka Natural Gas Co. is arranging to make test of 6 feet of sand in No. 4 Gully, James Matthews Survey, total depth 2,561 feet. Magnolia Petroleum Co.'s No. 3 Adams, James Matthews Survey, is in shale at 2,623 feet; No. 4 Ella Baker, B. C. Jordon Survey, set 4½-inch at 3,101 feet; No. 3 Lula Fletcher, B. C. Jordan Survey, cored shale at 2,590 feet. The Texas Company's No. 10-A Adams in the Thomas Cox Survey is a derrick.

ARKANSAS

Johnson County

Arkansas Natural Gas Corp.'s No. 2 Bynum, Section 12-10-24, is in sandy shale at 2,715 feet and No. 1 McPherson, Section 10-10-24, is fishing for 8-inch casing, total depth 3,455 feet.

Ouachita County

Mount Holly — Magnolia Petroleum Co. failed to get a drill stem test at 3,173 feet on No. 1 Wilson, Section 25-15-18, and is coring. Root Refineries' No. 1 Wilson, Section 25-15-18, cemented back to 2,845 feet and is building standard rig, total depth 2,855 feet.

Union County

El Dorado—Grimes Brothers' No. 2 Hill, Section 7-18-14, cemented 6-inch at 2,241 feet. Gulf Refining Co. cored No. 1 Rosa Cook, Section 1-18-15, in the redbeds at 3,575 feet.

Champagnolle—Gann and others have derrick up for No. 1 Doss, Section 10-17-14. H. L. Hunt set 10-inch at 172 feet on No. 7 Gregory, Section 10-17-14. Line Oil Refining Co. made location 330 feet south and east NW cor. SE SE Section 7-17-13. Magna Production Co. cemented 8⅝-inch at 3,072 feet on No. 2-B, El Dorado Realty Co., Section 7-17-13, total depth 3,088 feet. Ohio Oil Co. set 174 feet of 10-inch on No. 2 Adams, Section 7-17-13, total depth 1,240 feet; No. 1 Lynn in the same section ran core barrel at 3,052 feet; No. 1 E. Ralston, Section 12-17-14, has rig up.

CALIFORNIA FIELDS

(Continued from Page 56)

ment. The Standard has eight wells drilling, three below 5,000 feet and four additional rigs in course of construction. The Milham Exploration Co. is running three strings of tools with two wells below 6,000 feet at present, either of which, incidentally, may be finished within the next 60 days, as unusually rapid footage has been made up to the present time. The Marland, General Petroleum, Associated, Bolsa Chica and Shell are each running two strings of tools at present and making good progress. The Ohio Oil Co., George F. Getty, Pacific Western and Petroleum Securities all have one drilling project headed down to the pay.

Fruitvale

The Fruitvale Field of Kern County has recently experienced a little more than the normal amount of drilling which has prevailed in this district heretofore but it is quite likely that there will be a temporary lull during the next 30 or 60 days. Conditions in this field are rather unusual in that operators are developing production of crude oil which at present has very little value, not being especially suitable for either fuel oil consumption or refining purposes. The General Petroleum recently finished No. 1 Hensley in this field doing 380 bbls. daily from 3,945 feet, but shut it in immediately upon completion. The Western Gulf Oil Co., discoverer of the Fruitvale Field, has been following a similar procedure due to the inability to dispose of production at a favorable price. In the Belridge Field of Kern County where six strings of tools are in operation at the present time, the Belridge Oil Co. completed No. 30 doing 25 bbls. of clean 25.8 gravity oil daily from 699 feet, the hole having been finished with a 6¼-inch perforated liner. The Standard has the makings of what looks like a good well in the Wheeler Ridge Field of Kern County, as No. 26 in Section 27-11-30 showed considerable gas on a preliminary production test at 4,599 feet. The failure to secure a satisfactory water shutoff prevented completion of this well but favorable production is anticipated when the existing water trouble is remedied.

Ventura Avenue

With 46 strings of tools in operation and 28 wells rotating ahead below 5,000 feet, it is quite probable that the Ventura Avenue Field will continue to yield an average of one well a week for the next few months, unless drilling operations are subsequently restricted. The Associated, which completed No. 9 Hartman this week flowing 920 bbls. daily from 7,300 feet, is starting seven new wells and although they will not be spudded simultaneously, rig construction is getting under way for early work. The Shell, with several drilling projects nearing completion, is starting two new wells on the Taylor property and will probably also augment existing work on the Gosnell lease soon. The Shell's No. 16 Edison failed to come up to expectations on a recent production test at 7,157 feet and will probably require additional work, as it only showed an initial of 50 bbls. daily. Operators in the Rincon Field of Ventura County have shown a tendency to reduce drilling operations with the result that only a few strings of tools are in operation. The General Petroleum's No. 3 Tomson, a new well in this area, was finished during the early part of the past week doing 476 bbls. daily from 3,463 feet. No. 3-A Hobson of the same company was also completed after being plugged back from 6,651 feet to 4,510 feet, but it was not put on a production test due to a defect in the 9-inch casing.

SOUTHWEST TEXAS

(Continued from Page 48)

for 60,000,000 feet of gas, blowing all connections off except master valve and estimated largest gas well ever completed in the Carolina-Texas Field.

O. W. Killam's No. 9 Bruni, Survey 3, completed 2,346 feet for 40,000,000 feet of gas.

ABANDONED TESTS

Duval County

William F. Morgan's No. 1 Welder-Woods, Survey 102, has been abandoned dry at 2,750 feet.

Medina County

Donaldson Oil Development Co.'s No. 1 Adams Company, Survey 25, abandoned at 3,125 feet when hole caved.

Refugio County

Houston Gulf Gas Co.'s No. 4 O'Brien has been abandoned dry at 4,055 feet.

Nueces County

F. P. Zoch's No. 1 Carver dropped as test is same as one carried as No. 1 Nesloney.

NEW LOCATIONS MADE

Brooks County

Houston Oil Co.'s No. 1 Lassiter, Survey 69, Block 11, is location 330 feet south and east lines.

Bastrop County

Harper & Mitchell's No. 1 Riley Mitchell, adjoining Howell Oil Corp. block, is building derrick.

Gulf Production Co.'s No. 2 W. N. Bell, Riley Survey, is location in west central part of lease.

Trinity Drillers' No. 3 Andy Yoast, A. Garcia Survey, is location 160 feet to north line.

Caldwell County

Gulf Production Co.'s No. 5 J. L. Northcutt is location.

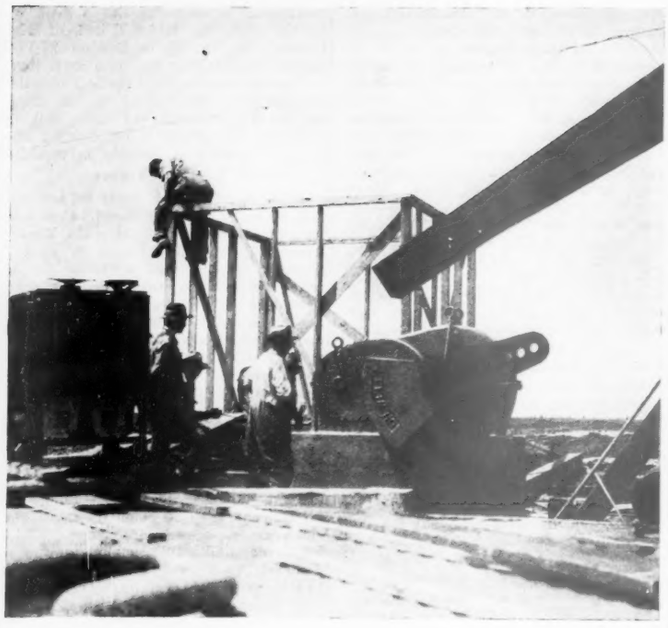
Humble Oil & Refining Co.'s No. 3 Briscoe has derrick up.

Humble Oil & Refining Co.'s No. 4 Martha Briscoe has derrick up.

Humble Oil & Refining Co.'s No. 1-B Floy Gray spudded in and set 34 feet of 10-inch surface casing.

Humble Oil & Refining Co.'s No. 2-B Johnson spudded in and set 39 feet of 10-inch surface casing.

Humble Oil & Refining Co.'s No. 1-B



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Westinghouse

Clyant Smith spudded in and set 38 feet of 12½-inch surface casing.

Humble Oil & Refining Co.'s No. 4-A J. R. Tiller has derrick up.

Humble Oil & Refining Co.'s No. 3 Wright is location.

Shell Petroleum Corp.'s No. 5 New is rigging up with rotary.

Bexar County

Dingman Drilling Co.'s No. 1 J. H. Gembler, Section 52, Doborowolski Field, 150 feet east line, is drilling below 600 feet.

Duval County

Robert Driscoll's No. 16 fee, Survey 448, located 2,650 feet east line, 4,000 feet north line, has set 200 feet of 10-inch casing.

G. M. Partee's No. 3 Moody, Survey 60, located 1,548 feet north line, 150 feet west line, has derrick up.

Guadalupe County

Tidal Oil Co.-Sinclair Oil Co.'s No. 1 is location in Williamson Survey.

Magnolia Petroleum Co.'s No. 1 Ed Adams, Samuel Highsmith Survey, 150 feet center of SW lines, is down 100 feet.

Kimble County

Carl L. Bruant's No. 1, C. E. Lambert Survey, west side, is moving in machinery.

Lindsay Brothers spudded in test in G. C. Amberson Survey in NE cor.

LaSalle County

J. G. Nix, Survey 68, Block 4, located 150 feet north line, 500 feet west line, is rigging up.

Jim Hogg County

George S. Marshall's No. 4 Holbien, Share 3, Survey 15, Block 10, is location 150 feet south and west lines.

George S. Marshall's No. 5 Holbien, Share 3, Survey 15, Block, is location 150 feet north and west lines.

Medina County

Balcones Oil Corp.'s No. 1 F. A. Fackle, Alexander Bailey Survey No. 184, located 300 feet NW cor., is building derrick.

Refugio County

Houston Gulf Gas Co.'s No. 4 Holmes Heard is drilling at 1,890 feet in sandy shale.

Webb County

George S. Marshall's No. 1 Webster, Survey 684, is location 150 feet north and east lines.

Trussell-Cezeaux-Putman's No. 2 Bruni, Survey 10, Block 40, located 150 feet northeast and northwest lines, has set 42 feet of 10-inch casing.

Zapata County

Trapshooter Reilly Oil & Royalties Co.'s No. 3 Hinnant, Survey 74, located 450 feet east line, 150 feet south line, is in sand at 1,597 feet.

Humble Field—Duval

Humble Oil & Refining Co.'s (Reiter-Foster) No. 15 Kohler, Survey 401, located 825 feet east line, 165 feet north line, bailed dry 2,765 feet; No. 16 Kohler, Survey 144, located 225 feet south line, 165 feet west line, is setting 10-inch casing at 337 feet; No. 17 Kohler, Survey 399, located 165 feet north and west lines, is down 2,935 feet; No. 20 Kohler, Survey 251, located 165 feet north line, 2,475 feet east line, in sand at 1,835 feet, is dry and standing; No. 22 Kohler, Survey 395, located 495 feet west line, 165 feet north line, is drilling at 920 feet; No. 23 Kohler, Survey 404, is location 1,485 feet south and west lines; No. 24 Kohler, Survey 423, is location 165 feet north and west lines; No. 25 Kholer, Survey 172, is location 165 feet north and west lines.

Schoolfield & O'Byrne Field

Magnolia Petroleum Co.'s No. 7-B Hahl, Survey 61, is location 650 feet south line, 2,950 feet east line; No. 2 Hahl, Survey 250, Block 24, located 150 feet north and east lines, is moving on. G. M. Partee's No. 2 Moody, Survey 60, located 450 feet west line, 150 feet north line, is location (reported spudded in, in error). S. & O. Oil Co.'s No. 2 Hahl, Survey 250, Block 22, located 160 feet north and east lines, set casing 2,336 feet. The Texas Company's No. 3 Hahl, Survey 250, Block 18, located 150 feet south and west lines, is testing sand at 2,348-50 feet. Onyx Oil Co.'s No. 5 Hahl, Survey 250, Block 20, located 150 feet south and east lines, has sand at 2,345-50 feet and is setting casing 2,336 feet.

Randado Field—Jim Hogg

Magnolia Petroleum Co.'s No. 42 Merchants State Bank, Survey 235, located 330 feet west line, 4,254 feet north line, is spudding in. Randado Oil Corp.'s No. 35 Palacious, Survey 291, Block 2, located 150 feet south line, 450 feet east line, is standing at 100 feet.

Schott Field—Webb

Livingston & Payne's No. 1 Guerra-Ochoa, Survey 58, located 917 feet east line, 470 feet south line, is drilling at 1,240 feet.

Reiser Field

W. O. Wheatley's No. 1 Wheatley, Survey 1,569, Block 3, located 848 feet north line, 305 feet east line, at 2,805 feet an old test, is to resume drilling.

Albercas Field

Sun Oil Co.'s No. 12-A Yeager-Strohman, Share 5, located 4,675 feet north line, 150 feet west line, is standing at 2,153-55 feet. Rycade Oil Corp.'s No. 8 Yeager-Strohman, Share 5, located 1,950 feet north line, 150 feet east line, is standing at 2,145 feet.

Carolina-Texas Field

R. O. Barnsley's No. 1 Barnsley, Survey 268, Block 15, located 581 feet south line, 150 feet east line, has sand at 2,103-09 feet testing gas; while setting casing, casing parted. W. R. Shankle's No. 1 Webster, NE SE, Survey 684, located 150 feet south and west lines, at 3,045 feet is showing some oil and is moving on rig. Trapshooter Reilly Oil & Royalties Co.'s No. 1 Benavides, NE NW, Survey 685, located 150 feet north and east lines, is drilling at 1,300 feet.

Magnolia-Cole Field

Cole Petroleum Co.'s No. 67 Benavides, Survey 412, Block 12, located 313 feet east line, 160 feet north line, is standing at 38 feet. Magnolia Petroleum Co.'s No. 1 J. G. Valdez, Survey 754, Block 15, located 150 feet south and west lines, has derrick up.

Cole Gas Field

O. W. Killam's No. 9 Bruni, Survey 3, is setting casing at 2,339 feet, sand at that depth.

Jennings Field—Zapata

South Texas Production Co.'s No. 4-A Jennings, Cerrito Blanco grant, 8,250 feet southwest lines, 6,825 feet southeast lines, is standing at 2,200 feet. O. W. Killam's No. 4 Hinnant, Survey 74, located 980 feet west line, 150 feet south line, is drilling at 1,575 feet. Magnolia Petroleum Co's No. 1 Cuellar, Survey 246, located 660 feet northeast lines and southeast lines, is rigging up.

Somerset—Atascosa-Bexar

Schimmel Production Co.'s No. 3 H. F. Gayle, C.E.P.I.&M. Survey, Block 2, is location 946 feet east of No. 1 American Central Oil & Gas Co.'s No. 4 Mary McConnell, W. G. Baker Survey No. 138, located 806.6 feet east line, 685.5 feet south line, is rigging up. W. H. Kennon's No. 2 fee, Survey 4, located 1,500 feet north 15 degrees east of No. 1, is drilling at 600 feet.

Pettus Field—Bee

Mission Drilling Co.'s No. 2 Ray has been delayed bailing at 2,890 feet.

Joe Bruner Field—Caldwell

Tips de Armond's No. 2 Carter, Gerren Hinds Survey, 170 feet west line, 147 feet north line, is drilling at 1,065 feet. Buchanan and others' No. 1 Trap-Briscoe, P. B. McCearly Survey, 150 feet south and east lines, is drilling at 3,620 feet. E. R. Brawn and C. O. Miller's No. 2 R. W. Carter, Gerren Hinds Survey, 150 feet north and west lines, has derrick up. Cranfill & Reynolds' No. 2 Hanson, James Hinds Survey, at 2,576 feet is waiting on cement; No. 3 Hanson, James Hinds Survey, is also waiting on cement at 2,587 feet. Forest Oil Co.'s No. 1 Bridges at 2,739 feet total depth, set 490 feet of liner at 2,737 feet. Gulf Production Co.'s No. 12 R. W. Carter, Gerren Hinds Survey, at 2,783 feet, bailed dry and shut down with motor trouble; No. 2 J. L. Northcutt, James Hinds Survey, 300 feet northeast of No. 1, is in chalk at 2,326 feet; No. 3 J. L. Northcutt, James Hinds Survey, 450 feet northeast lines, 150 feet northwest lines,

is in chalk at 2,278 feet; No. 4 J. L. Northcutt, James Hinds Survey, 300 feet southwest of No. 1, is in Georgetown at 2,594 feet. T. C. Hadley's No. 1 J. M. Hanson, James Hinds Survey, 150 feet south and east lines, is in chalk at 2,456 feet; No. 1 Merriweather, A. Floyd Survey, 119 feet north line, 150 feet east line, at 2,720 feet plugged back and is showing water and very little oil; No. 2 Merriweather, A. Floyd Survey, 450 feet west line in center of tract, is in chalk at 2,324 feet. Humble Oil & Refining Co.'s No. 1 Trap Briscoe, 150 feet SW cor., is at 2,757 feet waiting on cement; No. 1 C. F. Dye, James Hinds Survey, is in chalk at 2,386 feet; No. 1-C Floy Gray, James Hinds Survey, is drilling at 2,547 feet in Del Rio; No. 4 L. G. Hanson, James Hinds Survey, 150 feet NE cor., is at 2,711 feet waiting on cement; No. 1 Addie Hinds, James Hinds Survey, 226 feet north line, 191 feet west line, at 2,660 feet is waiting on cement; No. 2 Addie Hinds, James Hinds Survey, 226 feet north line, 491 feet west line, is drilling at 2,620 feet in Georgetown; No. 3-B Moses & Baggett, Samuel Shupe Survey, 150 feet east line, 1,050 feet south line, is drilling at 191 feet in shale; No. 4-B Moses & Baggett, Samuel Shupe Survey, 1,514 feet south line, 150 feet east line, has derrick up; No. 1 J. A. Northcutt, is drilling in chalk at 2,435 feet; No. 1 J. L. Northcutt, 226 feet north line, 205 feet west line, at 2,655 feet, is waiting on cement; No. 2 J. L. Northcutt, James Hinds Survey, 1,514 feet south line, 150 feet north line, is drilling at 2,560 feet in Del Rio; No. 1-A J. R. Tiller, James Hinds Survey, 150 feet west line, 1,050 feet south line, is in shale at 1,300 feet; No. 2-A J. R. Tiller, James Hinds Survey, 300 feet north of No. 1-A, is rigging up; No. 1-B J. R. Tiller, is drilling at 1,202 feet in shale; No. 2-B J. R. Tiller, 150 feet east of road, 219 feet north line, is drilling at 504 feet; No. 3-B J. R. Tiller, James Hinds Survey, 150 feet NW cor., is at 2,710 feet waiting on cement; No. 2 Tom Tiller, James Hinds Survey, is at 2,360 feet drilling in chalk. Luling Oil & Gas Co.'s No. 1 G. R. Carter, Gerren Hinds Survey, 150 feet north and west lines, is drilling plugs at 2,698 feet. Lutex Oil, Inc.'s No. 5 Wilson, A Floyd Survey, is at 2,426 feet drilling in chalk. Swearingen, trustee's (Herbert Morgan and others) No. 1 Caldwell County land, James Hinds Survey, is drilling at 2,160 feet in Taylor marl. Morgan-Duke's No. 2 Cora Malone, A. Floyd Survey, 300 feet southwest of No. 1, is partially rigged up. H. J. Powell, trustee's No. 2 Cora Malone, A. Floyd Survey, 300 feet south of No. 1, is drilling at 2,441 feet. Shell Petroleum Corp.'s No. 1 C. F. Dye at 2,575 feet is drilling in Buda; No. 1 Clyant Smith, 150 feet SE cor., is drilling in shale at 950 feet. The Texas Company's No. 7 Merriweather is drilling at 2,403 feet in chalk; No. 8 Merriweather is at 2,607 feet waiting on cement. Turman & Brown's No. 1 A. C. Bridges, A. Floyd Survey, 100 feet east line in center of tract, is at 2,623 feet drilling in Buda.

Roxana Field

Shell Petroleum Corp.'s No. 1 Jolly is drilling a deep test, and is about 400 feet in Edwards.

Dale Field

The Texas Company's No. 2 J. Moore, J. Gilbert Survey, 600 feet northwest lines, 1,600 feet southwest lines, is at 2,400 feet drilling in shale.

Luling Field

United North & South Development Co.'s No. 1 G. C. Gideon, Miles Dykes Survey, 880 feet north line, 320 feet west line, is drilling at 4,312 feet in Glenrose.

Sullivan Field—Gonzales

Benedum & Trees' No. 1 J. E. Lamkin estate, Winslow Turner Survey, is drilling at 4,135 feet. Empire Gas & Fuel Co.'s No. 2 Norwood, Winslow Turner Survey, 600 feet northwest of No. 1, is drilling in Georgetown topped 90 feet higher than Cranfill & Reynolds' No. 1 Webb.

Kingsville Field—Kleberg

Humble Oil & Refining Co.'s No. 5-B Dennett, Section 38, Block 19, located 400 feet north of No. 1, is drilling below 3,000 feet and will be a deep test; No. 4 Flato, Section 40, Block 10, located 250 feet east line, 450 feet north line, at 5,794 feet bailed dry and tested slight oil and gas; not commercial well and shut down for orders.

Agua Dulce Field—Nueces

Agua Dulce Oil & Gas Co.'s No. 1 Otto Wolters, Section 34, at 2,047 feet is shut down showing sulphur water. R. & G. Corp.'s No. 1 Brown, Section 87 is location; No. 2 Ed Brown, Lot 5, Section 6, about 1,900 feet east of No. 1, has derrick up.

Refugio Field—Refugio

Benedum & Trees' No. 4 Claude Heard, 600 feet south of No. 3, is down 502 feet; No. B-2 Rooke is at 3,678 feet setting casing and waiting on cement. Houston Gulf Gas Co.'s No. 5 C. Heard is redeepening; No. 1 J. F. B. Heard is drilling at 1,320 feet; No. 8 James Agnes Lambert is testing sand at 3,539-82 feet; No. 2 Rooke is at 1,620 feet drilling in sandy lime; No. 7 T. P. Shelly, 500 feet south and east lines in center of proven area, is coring and testing at 3,712 feet where test has oil sand showing 14 fourbles of oil on test. Houston Oil Co.'s No. 6 W. Heard, 517 feet west of No. 5, is at 520 feet drilling; No. 7 W. Heard has derrick up; No. 6 Rooke is reworking.

Mission Drilling Co.'s No. 1 J. E. Fos heirs, eastern flank of field, is bailing at 3,635-48 feet; No. 3 Rogers at 4,650 feet cored oil sand; No. 1 Powers is drilling at 1,836 feet; No. 1 J. F. B. Heard is drilling at 1,320 feet. Refugio Development Co.'s No. 1 City of Refugio, in street lease, standing, injunction sustained. Rogers-Heep and others' No. 1 Fox Estate, Block 4, location. Saxet Gas Co.'s No. 7 Claude Heard, 150 feet south of No. 6, is drilling at 3,674 feet. Sun Oil Co.'s No. 1 W. L. Rea is location to be started immediately.

SOUTHWEST WILDCATS

(Continued from Page 48)

School land tract. These tracts lie to the northwest of where the Rycade Oil Corp. has been drilling for the past few years. J. G. Lee has a block of 3,000 acres in the same area acquired lately and Southern has acquired 5,000 acres. Some locations are understood already staked out on the lease purchased from I. N. Boicourt. Mr. Boicourt is an oil man and geologist and has worked over that part of Maverick County and drilled a number of formation tests to around 1,000 feet and some of them deeper to prove a fault which he believes is the major faulting rather than the Balcones which is some distance to the north of it.

Bastrop County

Bastrop County which lies in the Balcones fault zone between the producing fields in Caldwell County on the southwest and the Rockdale-Minerva Pool on the northeast is attracting more attention. Two tests in that county, one the McCoyle well south of Bastrop at 2,750 feet and the Gypsy's No. 1 Lottman, at 2,560 feet, north and east of Bastrop have each had some showings of Serpentine with evidence of oil. Also there has been considerable blocking of acreage in that county lately, especially in the eastern half of the county which has been neglected heretofore.

Duval County

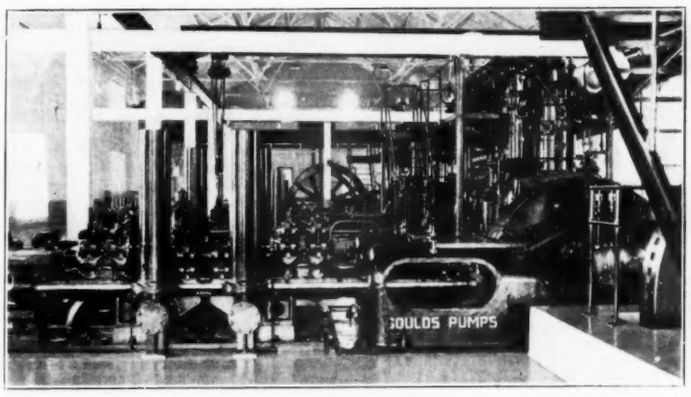
William F. Morgan's No. 1 Welders-Woods, Survey 102, located 2,725 feet east line, 75 feet south line, at 2,367 feet tested 12 trebles of salt water; drilling deeper.

Starr County

Ohio Oil Co.'s No. 1 Bass, Porcion 76, Block 71, is drilling. U. S. Oil & Gas Co.'s No. 1 Kelsey, Porcion 76, Block 11, located 1,500 feet north line, 500 feet west line, is standing at 900 feet. The Texas Company's No. 1 V. C. de Guerra, Porcion 68, Share 92, located 600 feet east line, 6,280 feet south line, is drilling at 2,519 feet.

Webb County

G. S. Lumpkin's No. 1 H. Yeager, Porcion 33-34-35, Block 17, located 1,170 feet east line, 150 feet south line, is location. L. W. Nelson's No. 1 Moglia,



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Survey 672, located 150 feet east line, 2,584 feet south line, is drilling at 2,565-feet. Usher Carson's No. 2 D. Benavides, Survey 1,613, Block 11, located 150 feet north and west lines, at 934-36 feet tested little gas.

Zapata County

William Muchelroy, Jr.'s, No. 1 Trevino, Block 25, Survey 412, 150 feet north line, is waiting on water to spud in. National Oil Co.'s No. 1 Don B. Adams, Section 11, Block 4, is setting surface casing at 200 feet. John Pappas' No. 1 Cuellar, Porcion 33-34, Block 5, located 333 feet northeast lines, 194 feet southeast lines, is drilling at 1,150 feet. R. V. Hill's No. 5 Ramirez, Survey 627, located 400 feet northwest lines and northeast lines, is standing at 1,395 feet.

Atascosa County

Amphion Oil Co.'s No. 1 Sam Schlisser, Farm B, 300 feet northeast lines, 600 feet southeast lines, is drilling at 1,830 feet in sticky shale.

Bastrop County

Gypsy Producing Co.'s No. 1 Lottman Estate, is shut down at 2,320 feet. Howell Oil Corp.'s No. 1 F. Wichman, near Page, spudded in and is down 50 feet. E. W. Ogden's No. 2 M. M. McCall, Stephen F. Austin Survey, 50 yards west of No. 1, is drilling at 2,800 feet.

Bexar County

Humble Oil & Refining Co.'s No. 2 Oppenheimer, J. M. Urriegas Survey, 300 feet north of No. 1, at 4,458 feet completed fishing job and is standing. Indian Creek Oil & Gas Co.'s No. 1 Wolfsohl, J. A. Navarro Survey No. 5, 180 feet to CEL, is at 1,597 feet, finished underreaming and will set casing and drill out plug. W. M. Morgan's No. 1 H. L. Martin is testing at 690 feet. Moore Jauer's No. 1 Holly R. Ellison, T. York Survey, 2,916 feet east line, 1,500 feet south line, is standing at 1,198 feet. J. Morgan Russell's No. 1 G. A. C. Halff is location in city limits of San Antonio.

Blanco County

C. W. Bates' No. 1 Herman Massey, Henry Manton Survey, 920 feet north line, 660 feet east line, is standing at 214 feet. Robert A. Rodson's No. 1 Glasscock, Survey 50, is located 150 feet CEL, standing at 962 feet with oil in hole. H. J. Uhl and C. E. Seldman's No. 1 is location on block adjoining Johnson City.

Brooks County

Amos W. Dinn and others' No. 1 R. Garcia, southwest part of county, at approximately 250 feet came in with large flow of artesian water. Milam Drilling Co.'s No. 2 Riley Allen, Block 89, SW cor., is rigging up.

Calhoun County

B. F. Thompson's No. 1 Thomas, John P. Tully Survey, 910 varas north, 5° 30" west of north corner of John C. Post Survey, has resumed drilling at 2,748 feet.

Caldwell County

Alexander & Smith's No. 1 J. A. Cardwell, J. P. Bell Survey, 150 feet south and west lines, is drilling in chalk at 1,460 feet. C. E. Ellzey's No. 1 Taylor is shut down at 42 feet. Russell's No. 1 Hill, McCullough Survey, is standing at 547 feet. Whittington and others' No. 1 J. G. Horner, Francis Berry Survey, is shut down at 1,140 feet.

Edwards County

A. M. Griffith's No. 1 Wardlaw, Section 60, Block V8, located 1,050 feet west line, 150 feet south line, is drilling at 1,550 feet.

Fayette County

Marshall & Moore's No. 1 John A. Kerr, M. Muldoon League No. 5, about 250 varas north line and little west of center, is drilling at 2,364 feet. National Oil Co.'s No. 1 J. C. Melcher, S. M. Williams League No. 1, located 300 feet north and east lines, is testing at 3,400 feet.

Goliad County

Humble Oil & Refining Co.'s No. 1 Reitz, core test, 3 miles north of Goliad, is drilling at 898 feet in shale and gumbo.

Gonzales County

Alexander & Smith's No. 1 Billings, G. Gwinn Survey, NW cor., is shut down after spudding in. Joe Bruner's No. 1 Miller, Richard Heath Survey, 3,040 feet north line, 200 feet east line, is drilling at 2,280 feet. Crown Petroleum Co.'s No. 1 Mrs. Hattenbach, James Jones Survey, 900 feet east line, 200 feet south line, is drilling at 1,400 feet with gas showing at 600 and 1,120 feet. Flynn's No. 1 Wilhausen, S. Bateman Survey, is shut down at 5,212 feet. Finnell & Elam's No. 1 J. Robinson, 5 miles north of Waelder, is rigging up and will spud in shortly.

Linderman Brothers' No. 1 F. H. Frampton, Richard Heath Survey, 2,120 feet north line of creek, 1,930 feet east line of farm, is drilling at 900 feet with good showings. W. G. Malone's No. 1 Staton, J. M. Salinas Survey, 375 feet southwest lines, 1,275 feet northwest lines, is shut down. Frank Sorrell's No. 2 Wilkenson, 100 feet north of No. 1, is drilling at 100 feet.

Guadalupe County

J. J. Christie's No. 1 Taylor Thomas, Gustavus Chotwell Survey, 1,100 feet southwest lines, 1,130 feet southeast lines, at 1,310 feet in Edwards is showing some gas. A. G. Kiffer's No. 1 B. B. Dix, Ira Nash Survey, 610 feet north of road, 320 feet east line, is standing at 1,050 feet. Miller Brothers' No. 1 Gib Springs, E. Cortari Survey, 450 feet west line, 775 feet south line, is drilling at 2,485 feet. Eugene Sights' No. 1 C. Woehler, John King Survey, 310 feet north line, 210 feet east line, is standing. Trinity Driller's No. 1 William Weinaug, 150 feet SE cor., is location.

Jackson County

The Texas Company's No. 1 W. C. Moore, Survey 208, located 5,108 feet south line, 150 feet west line, is drilling at 3,585 feet. Wright Brothers' No. 2 Classen is at 3,945 feet; No. 8 Drushell has derrick up.

Karnes County

Hurador Oil Co.'s No. 1 W. E. Porter, 6 miles south of Runge, is drilling at 1,400 feet. Scott Townsend and others' No. 1 Ruckman, 4½ miles northwest of Runge, is drilling.

Kendall County

A. D. Gibbs' No. 1 A. J. McCrocklin, 6 miles southeast of Sisterdale, is movin and rigging up.

Kerr County

L. R. Page and associates' No. 1 Neal, Survey 2, Block 15, center, has derrick up and tools on the ground.

Kimble County

H. A. McLean's No. 1 Cannon, Section 741, located 330 feet south and east lines, is drilling at 350 feet.

Kinney County

Lloyd Oil Co.'s No. 1 G. Bedell Moore estate, Section 117, located 1,320 feet CNL, is shut down at 1,000 feet in Del Rio, hole full of water from 300 feet. Mardon Oil Co.'s No. 1 Jim Clamp, Section 1,492, Survey 346, is standing at 2,540 feet with oil in hole.

Live Oak County

Houston Oil Co.'s No. 1 T. G. Parr, J. McMullen Survey, 532 feet southwest lines, 635 feet northeast lines, is drilling.

Maverick County

Rycade Oil Corp.'s No. 4 J. M. Chittim, Section 104, Block 7, is drilling at 1,280 feet; No. 3 Chittim, Section 116, Block 7, is down 3,530 feet; No. 4 Sullivan, Section 112, Block 7, is drilling at 880 feet.

Medina County

California-Medina's No. 1 Rothe, Survey 1,012, is drilling at 3,424 feet. F. M. Cline's No. 1 Bendele, Survey 593, located 600 feet west line, 150 feet south line, is standing at 815 feet. Donaldson Oil Development Co.'s No. 2 Adams Co., Joseph Hillemeyer Survey No. 25, is location 1,000 feet northeast of No. 1.

Lynch and others' No. 1 Mott is standing. Rawdon-Hughes and others' No. 1 A. L. Haegelin, Joseph Barnhart Survey, has let contract; No. 2 Bendele, Survey 593, located 75 feet north of No. 1, has been taken over at 937 feet from Richardson. Cecil Switzer's No. 1 Zerr is drilling at below 3,600 feet. T. N. T. Drilling Co.'s No. 1 A. Bendele, Survey 470½, located 150 feet west line, 500 feet south line, is drilling at 1,120 feet in tough gumbo. W. W. Woodsworth's No. 1 Reinhart, J. Hall Survey, 450 feet south and east lines, is drilling at 1,320 feet. Zigzag Oil Co.'s No. 1 San Antonio Subdivision Irrigation Farms, Inc., 4 miles northwest of Devine, has been spudded in.

Milam County

J. M. Burkhead's No. 1 C. Weigmann, A. Pollard Survey, 1,075 feet north line, 450 feet west line, spudded in and shut down. E. L. Chapman's No. 1 Gilchrist, J. J. Acosta Survey, 150 feet north and west lines, is drilling at 1,650 feet. H. E. Elliott's No. 1 J. C. Moore spudded in and set 30 feet of 10-inch casing. Groneman Brothers' No. 1 Dornhoefer is drilling at 2,580 feet. Rogers & Heep's No. 1 J. B. Duncan, J. J. Acosta Survey, 1,800 feet north line, 750 feet west line, took heavily saturated core and later on drill stem test showed 34 gravity oil, setting casing at 1,830 feet.

McMullen County

Natt Holman's No. 1 Shiner, Henry M. Brewer Survey, 7,515 feet south of Nueces River, 3,084 feet east.

Nueces County

Pearson and others' No. 1 Bluntzer, Block 3, NW cor., is standing at 3,507 feet. R. & G. Corp.'s No. 1 Perkins, W. W. Wright Survey, 150 feet west line, 1,920 feet south line, is standing at 3,510 feet; No. 1 Roberts is location; No. 1 Ragland is standing at 3,003 feet. Nueces River Basin Development Co.'s No. 1 F. C. Allen, G. Farrier Survey, is drilling at 3,065 feet.

F. P. Zoch's No. 1 H. B. Baldwin, Block 21, J. C. Russell Survey, 150 feet north and east lines, at 946 feet total depth set 413 feet of 12-inch surface casing; No. 1 Carver is drilling at 2,253 feet. F. P. Zoch and Texas Production Co.'s No. 1 Nesloney, Caso Blanco, 1,050 feet west line, 150 feet north line, is drilling at 2,412 feet with limey sand at 2,253 feet showing water.

Refugio County

Blanco Creek Oil Co.'s No. 1 St. John, J. Scott Survey, 708 feet northwest lines, 3,074 feet northeast lines, is drilling at 2,789 feet. Mission Drilling Co.'s No. 1 Mutchell, south end of Oak Street, in city of Refugio, is at 4,210 feet with good-looking sand which tried to blow out and has 475 pounds rock pressure through mud.

San Patricio County

Houston Gulf Gas Co.'s No. 3 Welder, 3 miles east of Welder Switch, is rigging up. J. T. LaPrade's No. 1 D. Odem, Herron Survey, 1 mile south of Sinton, at 3,380 feet cored salt water sand and is drilling ahead. George B. Pickett's No. 1 Whitworth, NE NE Section 60, has milled through casing and will start new side track hole.

Zavala County

Tritex Oil Co.'s No. 1 Clay Burns is drilling at 710 feet; No. 4 West is drilling at 1,000 feet; No. 6 West is down 520 feet and shut down; Noel Childress is drilling at 300 feet.

GULF COAST

(Continued from Page 51)

tle new production to the Coast. Gulf Production Co. got a 1,000-bbl. well on the east side of Pierce Junction but other wells were small. The Gulf well was No. 28 Taylor, flowing 30.6 gravity oil (at 80 degrees) from a hard sand lime at 4,478 feet.

At Raccoon Bend, three wells were brought in. Humble Oil & Refining Co. and Valley Oil Corp.'s No. 2 Saunders flowed initially 500 bbls. daily at 3,230 feet. These operators' No. 3 Thompson flowed 300 bbls. at 3,325 feet and their No. 1 Kalieszewski made a 1,500,000-foot gasser from the shallow sand at 1,-004 feet. Two other tests were due to be tested over the week-end.

Other completions were: Moody Corp.'s No. 3 Hume, Pierce Junction, flowing 600 bbls. fluid, 50 per cent b.s. and water, 4,593 feet; Humble Oil & Refining Co.'s No. 3-B Reviere, South Liberty shallow area, pumping 25 bbls., 1,982 feet; The Texas Company's No. 20 Staiti, same area, pumping 28 bbls., 1,640 feet; Mecom Oil Co.'s No. 1 Barrett, same area, flowing 300 bbls., 2,889 feet; Brownie-Babbette Oil Co.'s No. 8 McLean, Orange, pumping 40 bbls., 2,887 feet. Humble Oil & Refining Co.'s No. 22 Guedry, Hull, 800 bbls.; Lake View Oil Co.'s No. 2 B. & E., Sour Lake, pumping 6 bbls. net, 1,084 feet; Yount Lee Oil Co.'s No. 21 fee, Spindletop, flowing 800 bbls. fluid, 50 per cent oil, 2,874 feet; this company's No. 87 Gladys City, Spindletop, flowing 600 bbls., 2,750 feet; Abshire-Bolyard Oil Co.'s No. 5 Syndicate fee, Jennings, pumping 90 bbls. fluid, 60 per cent oil, 1,584 feet.

Barbers Hill—Chambers County

Sun Oil Co.'s No. 1 Chambers, southwest side of the dome, has drilled plug to test sandy shale showing oil at 5,530 feet. This company's No. 2 Chambers is in hard sand and lime at 2,970 feet. Yount Lee Oil Co.'s No. 4 Chambers is drilling shale and lime at 5,208 feet. No. 6 Chambers is drilling gumbo at 633 feet. Gulf Production Co.'s No. 1 Fisher fee is reaming to set screen at a total depth of 5,600 feet.

On the east side of the dome, Humphreys Corp.'s No. 7-A Kirby went into salt and has been abandoned at 3,450 feet. This company has made location for No. 8, 340 feet west of No. 7-A. No. 2-B Kirby is drilling shale and lime at 4,160 feet, No. 1-H Kirby is drilling rock at 2,216 feet, No. 1 Tarbutton is drilling sandy lime at 4,189 feet and No. 1 Ellfrey is a location. Mills Bennett Production Co.'s No. 1 Hamman-Armstrong is drilling sandy shale at 4,269 feet. No. 1 Smith (deep sand discovery well) is milling out to sidetrack at 4,507 feet. No. 2 Smith, producing well killed when Rexal Oil Co.'s No. 1 McLean drilled into it cutting the casing is trying to clean the hole and set a new string of casing. Rexal's No. 1 McLean, which drilled into the Smith well and stuck drill stem, has junked the hole and skidded the rig and derrick for a new hole. Rexal's No. 2 McLean is drilling sand and lime at 1,787 feet. Unice Oil Co.'s No. 1 Feldman has set casing at 4,896 feet. Talbert & Markle's No. 1 Ellfrey has set 6⅝-inch casing at 5,060 feet. These operators' No. 1 Schilling is drilling gumbo at 2,388 feet. Republic Production Co. has made location for No. 1 Kirby.

Mills Bennett Production Co.'s No. 1 Barber, north side of the dome, is drilling sticky shale at 4,928 feet.

Boling—Fort Bend and Wharton

H. R. Cullen and Gulf Production Co.'s No. 6 Bay, northeast side of the dome, is drilling gumbo at 1,807 feet. Sun Oil Co.'s No. 6 E. C. Farmer is drilling gumbo at 3,006 feet. No. 7 E. C. Farmer is rigged up. The Texas Company's No. 1 Bushnell is preparing to deepen from 3,937 feet as is this company's No. 1 Pleasants, which tested salt water at 3,-734 feet.

Blue Ridge—Fort Bend County

Gulf Production Co.'s No. 17-B Blakely, east side of the dome, came in early in the week flowing 20 bbls. daily from sand at 3,966 feet but now is rigging up to pump. This company's No. 15 Luscher, south side, is drilling at 407 feet. Moody Corp.'s No. 7 West-Schenck, south side, is drilling gumbo and shale at 3,735 feet. Sinclair Oil & Gas Co.'s No. 4 Davison tested salt water at 4,030 feet but is preparing to deepen. Navarro Oil Co. has made location for No. 1-C Robinson on the northwest side of the dome.

DeWalt—Fort Bend County

Humble Oil & Refining Co.'s No. 7 Sugarland is drilling sandy shale at 3,-382 feet. No. 8 is standing as a derrick. No. 1-B Deatheridge is drilling hard rock at 2,730 feet. No. 1 Hammer fee is drilling hard sand at 656 feet, No. 2 Hammer fee sticky shale at 1,576 feet and No. 4 Hammer fee shale at 2,541 feet. No. 3 is still a location. No. 6 Brazos Farms is down 2,948 feet. No. 3 Nelson and No. 4 Camp are rigged up and No. 4 Nelson is a location.

Raccoon Bend—Austin County

Humble Oil & Refining Co. and Valley Oil Corp.'s No. 1-D Ernest Grawunder, 9,000-foot south extension test, is drilling shale at 3,609 feet. No. 2 Ollie Wilson is drilling hard sand at 2,758 feet. No. 4 Hardy is down 227 feet where a string of surface casing has been run. A derrick has been completed for No. 3 Saunders and this will be rigged up with the rig from No. 2 which was completed during the week. No. 1 Buchanan is drilling sand at 3,570 feet. No. 1 Mueller

is drilling sandy shale at 2,907 feet. No. 2-A Bracey is drilling shale at 1,107 feet. No. 2-A Washington is drilling plug to test a sand showing oil at 3,247 feet. No. 1-B Washington is waiting cement to set at 1,179 feet. No. 1 Helmuth is drilling gumbo at 1,918 feet. No. 1 Stahlbaum is drilling sand at 676 feet. No. 1-A Mitchell is rigged up and No. 1-B Mitchell is a derrick.

Humble—Harris County

Humble Oil & Refining Co.'s No. 1 Williams, southwest deep sand extension test, failed to make a well in shale and sand at 3,938 feet and now is drilling deeper at 3,942 feet. South Texas Petroleum Co.'s No. 4 Morris is down 3,920 feet where 9¼-inch casing has been run. This company's No. 1 Burt is rigged up and a location has been made for No. 5 Morris. The Texas Company's No. 262 Landslide has set 9⅝-inch casing in brown shale at 3,950 feet. No. 263 Landslide is drilling deeper in gumbo at 649 feet after setting a string of 13⅜-inch surface casing there. A derrick is up for No. 264 Landslide and for No. 21 Wheeler & Pickens. No. 265 Landslide is a location. Marland Oil Co. also is rigging up for a deep test on the south side of the field. This is in the E. Ruhl Survey to the east of the deep production developed by South Texas Petroleum Co. and The Texas Company. Sun Oil Co.'s No. 47 River Bed on the north is drilling shale at 2,762 feet.

Spindletop—Jefferson County

Gulf Production Co.'s No. 8 Roche, an old well drilling deeper, is drilling at 3,156 feet. Unity Oil Co. and Yount Lee Oil Co.'s No. 48 McFaddin is drilling sand at 4,066 feet. No. 55, same lease, is drilling shale and lime at 5,189 feet. No. 100 is coring sand and shale at 4,007 feet. No. 101 is in sand and shale at 3,500 feet. No. 102 has been abandoned in cap rock cavity at approximately 2,780 feet, and the rig has been moved to the location for No. 103. On the Gladys City tracts, this company's No. 3 Gladys City is in sand at 4,100 feet. No. 13 is down 3,316 feet. No. 34 is in sand. No. 76, which tested salt water at approximately 5,750 feet, is preparing to deepen. No. 86 is in lime at 4,357 feet. No. 89 is drilling gumbo at 1,126 feet and No. 90 is rigged up. This company's No. 4 fee is rigging up to deepen.

Pierce Junction—Harris County

Gulf Production Co.'s No. 29 Taylor on the southwest flank of the dome is drilling at 3,069 feet. Pure Oil Co.'s No. 1 Herman estate, same area, is still trying to clean hole to deepen after testing salt water at 4,090 feet. Saxet Gas Co.'s No. 2 Herman estate to the north of the Pure test is in oil showing sand at 3,717-21 feet and has cemented 6⅝-inch casing to test. Rio Bravo Oil Co.'s No. 15-A Settegast, offsetting the Saxet Herman lease on the north, has spudded.

In the west flank field further north Rio Bravo Oil Co.'s No. 14-A Settegast has a derrick up. This company has abandoned its No. 7-B Settegast, a workover test, in sticky shale at 5,015 feet. No. 9-B Settegast, another workover, is sidetracking the former hole. No. 4 fee also is rigging up to deepen.

On the east side of the dome, Gulf Production Co.'s No. 8 Cain is drilling gummy shale at 4,344 feet. This company's No. 3 Fitzsimmons-Hamman is drilling gumbo at 3,970 feet. A location has been made for No. 30 Taylor. Navarro Oil Co. and Humble Oil & Refining Co.'s No. 3 Dooley is drilling gumbo and lime at 3,018 feet. Navarro and Texas Exploration Co.'s No. 15 Dooley is drilling broken lime at 3,392 feet. Navarro Oil Co.'s No. 1-B Cain is milling at 4,363 feet and will sidetrack. To the northwest Moody Corp. is rigging up for No. 2 Calvert and has spudded in at No. 4 Hume.

South Texas Petroleum Co.'s rank wildcat, No. 1 Meyers on the extreme south is drilling shale and sand at 4,201 feet.

Liberty—Liberty County

Following the completion of No. 2 Goggan as an extension producer to the east side flank production, Empire Oil & Gas Co. has made location for No. 3, 175 feet east of No. 2, and is building derrick. Sun Oil Co.'s No. 45 Mitchell, offsetting to the south the Empire well, is rigged up. The latter company's No. 44 Mitchell on the former north edge of production is drilling at 796 feet.

In the shallow area, Humble Oil & Refining Co.'s No. 4-B Reviere still is trying to pull screen to deepen. Navarro Oil Co.'s No. 3 Baldwin Community is drilling hard sand at 3,244 feet. This company's No. 4 Baldwin Community has been abandoned at 2,100 feet. Vacuum Oil Co.'s No. 11 Barrett, which has been shut down at 2,750 feet, is building a new rig and will go deeper. Liberty Oil & Sulphur Co.'s No. 1 Monroe is rigging up to pump at 528 feet. It set 27 feet of 4½-inch strainer to test cap rock showing, and oil is standing in the hole.

Big Creek—Fort Bend County

Gulf Production Co.'s No. 53 Davis is drilling hard sandy lime at 3,008 feet. This company's No. 34 Davis, a workover, is drilling at 3,337 feet. Navarro Oil Co.'s No. 3 Hausler is drilling shale and lime at 2,534 feet. The Texas Company's No. 5 Wheat is drilling gumbo and lime at 2,820 feet.

Orange—Orange County

Sinclair Oil & Gas Co.'s No. 5 Granger, a former producer being worked over, is in oil showing sand at 3,017 feet and late in the week was bailing. Orange Petroleum Co.'s No. 3 Michael Berwick, also a workover, is drilling at 4,309 feet.

Hull—Liberty County

Of particular interest at Hull is Gulf Production Co.'s No. 25 Morris-Phillips, a deep test which is drilling below 5,088 feet. Republic Production Co.'s No. 50 Dolbear has been shut down after testing salt water at 3,122 feet. Total depth of the hole is approximately 4,200 feet. This company's No. 65 Dolbear is drilling at 2,123 feet, No. 97 Dolbear at 1,035 feet, and No. 1 Taylor at 2,517 feet. Daisetta Oil Co.'s No. 1 Wilson is drilling at 731 feet and Empire Gas & Fuel Co.'s No. 21 Barngrover at 3,558 feet.

Saratoga—Hardin County

West Production Co.'s deep test, No. 1 Baker, is down 4,350 feet and reaming. Weldon Oil Co. is bailing to test a shallow sand at 1,584 feet in No. 18 Hooks.

SOUTH LOUISIANA

Hackberry—Cameron Parish

Calcasieu Oil Co.'s No. 6 Dorion, East Hackberry, is drilling gumbo at 3,746 feet. This company's No. 1 Lenke is drilling shale and boulders at 2,706 feet.

At old Hackberry, Farm Oil Co.'s No. 1 Duhon, south side, is shut down waiting orders at 3,868 feet. McClain Oil Co.'s No. 1 Ellender has been abandoned in heaving shale. Progressive Oil Co.'s No. 1 Little is shut down waiting orders at 3,014 feet. Sunshine Oil Co.'s No. 1 Vincent is drilling shale and sand at 2,014 feet. Yount Lee Oil Co.'s No. 2 Kaough is reaming to set casing, after plugging from heaving shale at 3,240 feet to a sandy shale at 2,757 feet. This company's No. 3 Kaough has cemented casing at 2,998 feet.

Lockport—Calcasieu Parish

Shell Petroleum Corp.'s No. 1 Miller is drilling hard blue shale and lime at 4,966 feet. The Texas Company's No. 1 Moss is drilling gumbo at 3,481 feet. Vacuum Oil Co.'s No. 5 Bayou D'Inde has cemented 9⅝-inch casing at 4,357 feet to test an oil showing at a total depth of 4,395 feet. No. 3 Bayou D'Inde, a former producer, is preparing to work over. It is at 4,400 feet. Vacuum's No. 24 Miller is drilling sandy shale showing oil at 3,831 feet. Nos. 9 and 15 Miller, both former wells, are working over.

Jennings—Acadia Parish

Fred Getty's No. 2 Jennings-Clemont late in the week had set strainer and was bailing to test at a total depth of 1,685 feet. Yount Lee Oil Co.'s No. 6 Housierre-Latrielle is coring sand at 7,106 feet. This company's No. 4 Crowley is drilling shale and lime at 6,379 feet.

Sulphur—Calcasieu Parish

Union Sulphur Co.'s No. 744 fee is drilling gumbo at 3,271 feet. No. 745 fee is drilling rock at 2,746 feet. No. 729 fee is drilling rock at 2,432 feet.

MISCELLANEOUS FIELDS

At Nash, Brazoria County, Rycade Oil Corp. has made location for No. 26 Wisdom, which is 500 feet due southwest of No. 23 Wisdom. The latter, which drilled into salt to 4,872 feet and then swabbed a small amount of fluid at 4,259-4,360 feet, has been abandoned. It was a former well deepened. Sinclair Oil & Gas Co.'s No. 6 Norton, Damon Mound, Brazoria County, is drilling gumbo and lime at 2,978 feet. Leonard Petroleum Co.'s No. 4 Wisdom, same field, is drilling gumbo at 262 feet. Rycade Oil Corp. and Humble Oil & Refining Co.'s No. 6-A Kountze, Markham, is trying to clean hole at 3,797 feet to deepen. West Production Co.'s No. 1 Myers, also Markham, is drilling hard sand at 4,238 feet. Gulf Production Co.'s No. 19 Moore, Orchard, Fort Bend County, is drilling at 1,599 feet. Sun Oil Co.'s No. 2 Kovelcik, North Dayton, is drilling shale at 3,705 feet.

In South Louisiana, Pure Oil Co.'s No. 8 Yount Lee Oil Co., Sweet Lake, Cameron Parish, is bailing to test showings at 5,657 feet. This company's No. 7 Yount Lee Oil Co. is fishing at 5,426 feet. Yount Lee Oil Co.'s No. 4 Louisiana Petroleum Co., Anse La Butte, St. Martin Parish, has been abandoned in salt at 5,591 feet. Rycade Oil Corp.'s No. 7 Bouillon fee, Bayou Bouillon, St. Martin Parish, is drilling sandy shale and lime at 3,538 feet. This company's No. 3 Louisiana State, which drilled into cavity at 3,331 feet, is trying to sidetrack. Gulf Refining Co.'s No. 14 United Land Co., Sorrento, Ascension Parish, is drilling at 3,206 feet. This company's No. 15 Lutcher-Moore, Starks, Calcasieu Parish, is drilling at 4,459 feet, and its No. 13 Industrial is at 4,660 feet.

MISCELLANEOUS WILDCATS

TEXAS

Austin County — Flanigan & Mewis Drilling Co.'s No. 1 A. E. Mewis, west of the Raccoon Bend district, is drilling at 3,200 feet.

Brazoria County — Meyers and associates' No. 3 Davidson, Clemens Dome, is standing after testing salt water and sulphur water in cap rock at 926 feet. Empire Gas & Fuel Co.'s No. 3 Brock, Stratton Ridge, is drilling shale and lime at 2,430 feet. Humphreys Corp.'s No. 1 Bryan, Bryan Mound, is drilling sidetracked hole at 2,828 feet. Shell Petroleum Corp.'s No. 4 Allen, Allen Dome, is trying to sidetrack after failing to fish stuck drill stem at 5,154 feet.

Chambers County—Pure Oil Co.'s No. 2 Mayes, Lost Lake, is drilling shale at 1,617 feet. No. 3 Mayes, same dome, is drilling sandy shale and gumbo at 1,767 feet.

Colorado County — The Texas Company has abandoned No. 1 Kinkler, Cat Springs, in sandy shale at 1,348 feet. Shell Petroleum Corp.'s No. 1 Frazier, Bernardo, is drilling at 1,000 feet. Humble Oil & Refining Co.'s No. 1 McGraw, Altair, is drilling at 436 feet.

Fort Bend County — Gulf Production Co.'s No. 15 Wolf, Long Point, is drilling sandy lime at 592 feet. South Texas Petroleum Co.'s No. 1 Winkleman, Needville, is drilling gumbo and lime at 3,080 feet. Humble Oil & Refining Co.'s No. 1 Miller, Rosenberg, is rigged up.

Grimes County — Deering and associates' No. 1 Kelley, east of Carlos, is drilling 1,271 feet.

Harris County—Humble Oil & Refining Co.'s No. 1 Irvin, Mykawa, is drilling at 3,714 feet. This company's No. 5 Warren at Hockley is drilling at 4,292 feet, and its No. 1 Woodburn at Genoa is rigged up. Little York Oil Co.'s No. 1 Davis, Little York district, is shut down for fuel at 3,250 feet. Paxton and associates' No. 1 Brown, Wooster Townsite, is drilling gumbo at 1,830 feet.

Jackson County — The Texas Company's No. 1 Moore, D.&G.N. Survey No. 311, 16½ miles north of Edna, is drilling shale and sand at 4,946 feet. This company's No. 1 Lowarance (taken over from Wright & Douglas) John McHenry Survey, 12 miles northwest of Edna, is reaming hole larger to deepen. This test formerly was abandoned at 3,030 feet.

Jefferson County — The Texas Company is having considerable trouble with gas in its No. 1 Pipkin, Big Hill, and efforts to set screen have been unsuccessful. Saturday the test was pumping mud in an attempt to kill another near blowout. Gulf Production Co.'s No. 7 Bordages, Fannette, is drilling shale at 5,305 feet, and its No. 11 Thomas is drilling hard, sandy shale at 5,025 feet. Nederland Oil & Development Co.'s No. 1 Young, Nederland, is drilling gumbo at 1,746 feet. Shell Petroleum Corp.'s No. 1 Heisig, Hampshire, is drilling sticky shale at 3,224 feet. Yount Lee Oil Co.'s No. 1 Nona Mills, Hillebrandt Survey, is drilling shale and lime at 6,385 feet.

Liberty County—Humble Oil & Refining Co.'s No. 4 Sterling, Moss Bluff, has been abandoned in salt at 3,619 feet. A location has been made for No. 5 Sterling. Republic Production Co.'s No. 1 Myalives, north of Hardin, is drilling gumbo at 2,968 feet. The Texas Company's No. 2 Davis, Davis Hill, is drilling sandstone at 4,249 feet. Union Exploration Co.'s No. 2 Esperson, Sheeks, has been abandoned after showing water at 6,014 feet. Gulf Production Co.'s No. 1 Boyt, Hankamer, is drilling at 1,200 feet.

Matagorda County—Crossland and associates' No. 1 Hawkins, Shepherds Mott, went into heaving shale at 4,934 feet and is drilling in that formation at 5,902 feet.

Waller County—The Texas Company's No. 1 Young is drilling sandy shale at 2,959 feet.

SOUTH LOUISIANA

Ascension Parish—Gulf Refining Co.'s No. 14 United Land Co., second deep test at Sorrento Dome, is drilling at 3,216 feet. This company's No. 1 Belle Helene, Darrow Dome, is drilling at 5,221 feet. Belle Helene Oil Co.'s No. 1 Breaux has spudded. Triumph Oil Corp.'s No. 2 Lacey, southeast of the town of Sorrento, has resumed operations and is drilling at 2,275 feet.

Calcasieu Parish—J. O. Davis' No. 1 Mimns, Section 20-9s-7w, is drilling gumbo at 2,371 feet.

Cameron Parish — Shell Petroleum Corp.'s No. 10 Watkins, Black Bayou, is drilling blue shale at 901 feet. Shell's No. 9 Watkins, which was to have been abandoned, is to be put on the pump at 981 feet. This company's first deep test, No. 6 Watkins, at Black Bayou, was completed during the week. The Texas Company's No. 3-A Calcasieu Lake, Calcasieu Lake Dome, is standing pending drilling a water well.

Iberia Parish—The Texas Company's No. 3-A Vermillion Bay is shut down for repairs. It is in rock at 4,694 feet. Gulf Refining Co.'s No. 1 Moresi, Loreauville, is drilling at 3,446 feet.

Iberville Parish — Shell Petroleum Corp.'s No. 3 Wilbert, White Castle, is drilling sandy shale with streaks of sand at 4,613 feet. Standard Oil Co.'s No. 2 Wilbert, Bayou Blue, is drilling at 1,774 feet. No. 3 is rigged. No. 1 Schwing is drilling hard sand and rock at 4,531 feet. No. 2 Schwing is rigged and Nos. 3, 4 and 5 are locations.

Plaquemine Parish—The Texas Company's No. 1 Gardan, Island Bay, southeast of Venice, has set 9¼-inch casing at 1,100 feet. Gulf Refining Co.'s No. 1 Morris & Rose, Spanish Pass, is standing.

St. Landry Parish—The Texas Company's No. 2 Botney Bay, Point Barre, is drilling gumbo at 1,214 feet. Gulf Refining Co.'s No. 1 Gaudet, also Point Barre, is rigged.

Terrebonne Parish—The Texas Company's No. 1-B Bay Coon Road, Section 17-22s-18e, is drilling sand at 212 feet. This company's No. 1-A Dog Lake Bayou, Section 6-22s-16e, is shut down in sandy shale at 882 feet. The Texas Company's No. 1-B Lake Pelto, Section 8-23s-18e, is moving in material. The Texas Company's No. 1-A Timbalier Bay, Section 19-23s-20e, is rigging.

Tangipahoa Parish — Joan Development Co.'s No. 1 Hilton is drilling shale at 1,946 feet. St. Tammany Oil Co.'s No. 2 Fritchie, Section 35-8s-14e, has resumed operations and is drilling shale at 1,367 feet.

RULING ON MEXICAN PERMITS

The Mexican Department of Industry, Commerce and Labor states that continued delay in issuing oil drilling permits, due to failure of companies and individuals to comply with necessary requirements, will not be permitted.

Fire failed to put these Butler Storage Tanks out of commission. No repairs needed except paint.

One fire was enough

REGENT N. D. IS SCENE OF BAD FIRE

Town Barely Escapes Being Wiped Out After Oil Explosion

(Herald Special Service)
Mandan, N. D., Feb. 27.—But for a favorable medium strong wind today which swept the flames away from the business and residence section, the village of Regent in Hettinger county 130 miles southwest of Mandan would tonight be a mass of ruins as the result of a spectacular oil fire which started at 3 o'clock this afternoon.

Cant Cornell, tank truck driver, returned from a trip and drove his machine into the sheds of the Leonard Prince oil supply station and went over to town for a belated noon meal. Fifteen minutes later there was an explosion that tore the truck to pieces and hurl[illegible] throu[illegible]

With the addition of this Butler Steel Building, the Regent station is completely equipped to resist fire.

BUTLER Steel Products proved their "metal" in this fire. Three large Butler Storage Tanks are being used today without any repairs after coming through the flames.

The disaster persuaded the Regent Oil Company, Regent, North Dakota, to quickly order a Butler Ready-Made Steel Building to house its products. Mr. L. E. Prince, Mgr. of the Regent Oil Company writes: "With reference to the steel building purchased from you some time ago, will say we are doing business again and we don't have to worry any more about another fire now that we have our Butler All Steel Fire-Proof warehouse installed.

"We also appreciate your prompt service in making shipment so that little time was lost. We appreciate too, the splendid cooperation extended by your salesman, Mr. Krysel. We are very pleased with the building and were surprised how easy it was erected."

The first step in fire prevention is to write for the interesting Butler Steel Building Catalog.

BUTLER MANUFACTURING COMPANY

KANSAS CITY, MO. BUTLER PRODUCTS MINNEAPOLIS, MINN.

Butler Products include: Ready-Made Steel Buildings, Cans, Funnels, Buckets, Measuring Pumps, Truck Tanks, Underground Tanks, Storage Tanks, Bolted Tanks, etc. Pipe that can be used as conduit, double well casing and for other purposes.

Practical Suggestions in Refining

By W. T. Ziegenhain

Funnel Catches Oil Drip While Gauging Interior Lub Tanks

The roofs of inside lubricating oil tanks such as cold settling tanks and chilling tanks used in the manufacture of bright stock, soon become slippery and dirty around the gauging hatch unless some means is provided to catch the drip from the gauge pole and the thermometer whenever the tank is gauged. Ordinarily these roofs are covered with an insulating material and if it becomes soaked with oil, its insulating value is reduced, besides causing a deterioration of the material and its premature replacement.

An inexpensive funnel shaped drip-catch, made from galvanized sheet iron and fitted on the bottom with a threaded connection to be screwed into a threaded plate in the roof of the tank as the opening, has been found satisfactory. The funnel stands about 18 inches above the roof of the tank and is about 18 inches in diameter across the open face at the top. The base of the funnel is heavily soldered or welded into a standard galvanized 3-inch connection with male and female threads. This provides a 3-inch opening for the gauge pole, sample bottle, etc.

Inside the funnel, a plate shaped like a half moon is soldered to the sides, about 4 inches from the top of the funnel and provides a rest for sample bottles, the thermometer and chain, etc. The plate is slightly dished and is perforated to allow the oil to drain back. The plate, being shaped as a half moon does not interfere with taking a guage and leaves the 3-inch hole entirely open throughout the full length of the funnel. Where there is a chance for dirt or water to fall into the funnel, it is an easy matter to fit a round cap over the top of the funnel, and, to keep it from rolling away, may be chained to the funnel.

OHIO REFINER CREATES INTEREST IN SALVAGING

A large Ohio refiner has stimulated interest in the salvaging of unused equipment by creating a separate department for that work and sets up a book credit for that department of 25 per cent of value on all material taken out for new construction work in the plant. This department is expected to keep the refinery grounds free of unused equipment, to recondition it when it deems it is worth it and to show a "profit" at the end of the year.

The vice president said, "You would be surprised how anxious that superintendent is to see the figures at the end of each month." In turn, this system does not call for any extra amount of bookkeeping since this equipment must all be accounted for as it is torn down and reused in order to keep a record of the refinery investment. Similarly, this holds the investment at a minimum on new work. The 25 per cent credit is, of course, expected to more than pay the cost of reconditioning and since the refinery construction department may turn down the salvaged equipment if it will not fully serve the needs satisfactorily the responsibility is placed with the salvaging department in judging when and when not to attempt to recondition a certain piece of equipment.

This system proves to be particularly valuable in this plant for there is considerable old equipment constantly being torn down and new going in. Salvaged pipe, fittings and auxiliary equipment generally constitutes a substantial portion of the "new" installation, but this may be made equally true at other refineries.

FACTORS IN DETERMINING RELATIVE COST OF TWO GRADES OF GASOLINE

The relative cost of 64-66 375 and U. S. Motor gasolines is a question with which the refinery operator is often confronted. It is particularly pertinent in the Mid-Continent area at this time. There are too many factors involved to apply to all plants to set up a definite cost relationship between making the regular 58-60 U. S. Motor grade and the 64-66 375 endpoint gasoline, but there are certain major factors which can be considered.

The largest factor involved is the lesser yield of the 375 endpoint gasoline compared to the 437 gasoline. The relation between these yields, from the same crude, largely depends upon the degree of effectiveness of the fractionating equipment. By this time, however, the difference among plants is small for practically all of them have installed efficient towers. With this as a basis in the accompanying table, two realizations have been worked out showing yields and earnings, first, when making all 58-60 U. S. Motor gasoline and then one intended to show what price that same refiner has to get for his 64-66 375 endpoint gasoline to equal the earnings from the first method of operation when making a maximum yield of the 375 endpoint gasoline.

Present prices were used in all cases.

Limiting the problem to one of skimming only, and taking yields based on refining a barrel of average Mid-Continent crude (37-38 gravity) the result indicates that when 58-60 U. S. Motor gasoline is selling for 7¾ cents, the 64-66 375 endpoint gasoline may be sold for 8¼ cents in order the refiner make the same return. This difference in price is below that observed over the last few years and would not be representative now unless the change in operations continued over a period of several weeks at least. There is always some expense involved in making a change and the total is a large factor if these changes are made often.

The expense may not show up as a direct operating expense in labor and material but will show up in lesser yields during the period of the change by more rerunning, inconsistent results from treating and a withdrawal of attention from the other regular work.

How much this expense will amount to is a matter entirely dependent upon the conditions in the plant and is best estimated by the operator at the time. The following sets of realizations ignore this charge and simply allow for a comparison of results after the two operations are in progress.

A crude yielding 38 per cent U. S. Motor gasoline will generally yield about 24 per cent 375 endpoint gasoline. Another cut of heavy material may be taken off at the same time so the composite of the gasoline yield when running to maximum 375 endpoint gasoline is 32 per cent compared with 38 per cent when making all U. S. Motor. This is equalized in the increased kerosene yield in the second case.

Enough natural gasoline must be purchased to blend up the heavy cut to bring it within U. S. Motor specifications. The gas oil yield is decreased slightly when making the 375 endpoint gasoline by including a portion of this fraction in the broad kerosene cut. The quantity and the quality of the fuel oil remains the same in both cases, so in the realizations the earnings from these remain the same. Referring to the two realizations, the difference in the cost of processing is all in the cost of using natural gasoline. When making 375 endpoint gasoline for export, it is usually necessary to use natural gasoline, the equivalent of 10 per cent of the volume of the straightrun gasoline. The heavy naphtha cut requires up to 30 per cent natural gasoline. These figures have been used in computing the cost of using natural gasoline in the realizations. Similarly, 8 per cent has been used as the amount of natural gasoline added to the straightrun when a maximum volume of U. S. Motor gasoline is made.

Natural Gasoline

At present, Grade AA natural gasoline is purchased at 7¾ cents and the freight cost to the refinery will average 2 cents in the Mid-Continent. In the plant, due to unloading, blending and reloading there is an evaporation loss on the natural gasoline of approximately 5 per cent over the year. This is also figured as a charge against the use of natural gasoline, although it is somewhat a matter of the efficiency of the plant.

In arriving at a cost to be included in the realization based on per barrel of crude run the number of gallons of straightrun gasoline made per barrel of crude is multiplied by the percentage of natural gasoline needed and the result is the number of gallons of natural gasoline used per barrel of crude processed. Adding 5 per cent to this, the result is the volume of natural gasoline purchased per barrel of crude processed.

If the natural gasoline is purchased at a delivered price of 9¾ cents as explained before, and the refiner sells it in a U. S. Motor blend for 7¾ cents it is costing him 2 cents on every gallon used. If he buys it at 9¾ cents and sells it in a 375 endpoint gasoline blend at 8¼ cents it is costing him 1½ cents per gallon. Thus the cost of using natural gasoline, when figured on this basis, shows up less when it is blended with the gasolines commanding the higher prices.

The detailed figures show when making a maximum volume of 375 endpoint gasoline, 10.08 gallons of straightrun 375 endpoint gasoline and 3.36 gallons of naphtha are made per barrel of crude. Taking 10 per cent of the 10.08 gallons, plus 5 per cent, the amount of natural gasoline used to blend with the 375 endpoint is 1.058 gallons. Taking 30 per cent of the 3.36 gallons plus 5 per cent, the amount of natural gasoline needed to blend with the heavy gasoline is 1.058 gallons. The cost of using the natural gasoline blended with the 375 endpoint is 1.058 times 1½ cents or $.0159. The cost of using it in the heavy U. S. Motor blend is 1.058 times 2 cents or $.0212. The sum of these is $.037 as shown in the realization No. 2. The cost of using natural gasoline in the U. S. Motor gasoline was figured in the same manner.

REALIZATION NO. 1

Refinery revenue per barrel of average Mid-Continent crude (37-38 gravity) skimmed at present prices when making all 58-60 U. S. Motor gasoline.

Yields			Revenue
33 per cent Gasoline (U. S. Motor)	@	.0775	$1.259
6 per cent Kerosene (41-43 gravity 165 flash)	@	.06	.151
28 per cent Gas oil (32.33 gravity)	@	.025	.294
26 per cent Fuel (18-20 gravity)	@	.50 bbl.	.130
2 per cent Loss			
Gross revenue per barrel refined			$1.814
Cost of crude at well		$1.230 per bbl.	
Pipe line charges		.150 per bbl.	
Skimming and treating		.120 per bbl.	
Cost of using natural gasoline		.027 per bbl.	
Total cost of refining operation			$1.527
Margin from skimming to pay sales, overhead and other charges			$ .287

REALIZATION NO. 2

Realization per barrel statement to determine relative value of 64-66 375 endpoint gasoline and 58-60 U. S. Motor gasoline. Revenue based on present prices and when skimming average Mid-Continent crude.

Yields			
24 per cent Gasoline (375 endpoint)	@	7	$ .822
8 per cent Gasoline (U. S. Motor)	@	.0775	.260
13 per cent Kerosene (41-43 gravity 160 flash)	@	.06	.328
27 per cent Gas oil (32-33 gravity)	@	.025	.284
26 per cent Fuel (18-20 gravity)	@	.50 bbl.	.130
2 per cent Loss			
Gross revenue needed to show same earnings as when making all U. S. Motor gasoline			$1.824
Cost of crude at well		$1.230 per bbl.	
Pipe line charges		.150 per bbl.	
Skimming and treating		.120 per bbl.	
Cost of using natural gasoline		.037 per bbl.	
Total cost of refining operation			$1.537
Needed margin to equal that obtained when making all U. S. Motor gasoline			$ .287
Price needed to receive for the 64-66 375 endpoint gasoline			$.0820

Recent Patents

TREAT IN VAPOR PHASE WITH PHOSPROROUS ACID

1,709,315. Method of Refining Mineral Oils. Arthur Lachman, Berkeley, Calif., assignor to Richfield Oil Co. of California, San Francisco, Calif., a corporation of Delaware. Filed December 8, 1926. Serial No. 153,249. 4 Claims. (Cl. 196—36.)

1. A method of refining mineral oils which consists in heating the oil to form a vapor, passing the heated vapor through or in contact with a body of phosphoric acid maintained under high concentration, maintaining the acid at such concentration by the continuous addition of water and condensing the vapor after passing through the fluid acid.

TREAT UNDER PRESSURE

1,709,203. Process of Purifying Petroleum Oils. John C. Black, Destrehan, La., and Wirt D. Rial and Raymond T. Howes, Wilmington, Calif., assignors to Pan American Petroleum Co., Los Angeles, Calif., a corporation of California. Filed April 26, 1926. Serial No. 104,836. 5 Claims. (Cl. 196—145.)

1. In the treatment of hydrocarbon oils to free them of emulsifying compounds, the process which consists in treating the oil with a relatively weak alkaline solution under pressure and agitation with live steam, separating the aqueous solution from the oil; and in then removing the soap forming compounds by converting them into oil-insoluble compounds, adding clay to the oil thus treated and then filtering the oil.

(Additional Patents on Page 177)

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WANTED — Engineer qualified by training and experience to handle design and engineering of complete petroleum refining plants. Position now open with old established equipment builders. Reply should give complete information of training and experience and salary. Write Box C-930, The Oil and Gas Journal, Tulsa, Okla.

WANTED—By manufacturer, one or two men with practical refinery operating experience to sell and service well-known special steel fittings used on tube stills and cracking coils. Engineering and selling experience desirable but not essential, as we want men who know tube still construction and operation and who have good personalities. Plant is in Ohio. Give age, family, record, experience and references. Address Box C-932, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Superintendent for Oklahoma refinery. Must have experience in pipe still, Dubbs cracking, and continuous treating operation of west Texas crudes. State training, past and present connections and salary required. Box C-933, The Oil and Gas Journal, Tulsa, Okla.

ENGINEER experienced in the design of compression and absorption natural gasoline plants, for the position of assistant engineer. Must have thorough knowledge of modern equipment and practice and be capable of assuming responsibilities of chief draftsman. Interview by appointment only, or in correspondence. State in first letter, age, experience, education and salary expected. Location Tulsa, Okla. Forrest E. Gilmore Co., 408 Wright Building, Tulsa, Okla.

EXPERIENCED CHEMISTS, two to five years' refinery operating experience; also chemist one year analytical experience. State age, training, detailed experience, references, salary expected, also small photo. Shell Petroleum Corp., East Chicago, Ind.

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TRAFFIC MANAGER with long experience with leading Oil Well Supply Manufacturers, at liberty after March 1. Wants to locate in West or South. Willing to start at reasonable salary and let results care for future. Box C-752, The Oil and Gas Journal. Tulsa, Okla.

Major company geologist employed in Tulsa twelve years desires position chief geologist with an independent company or individual or as buyer for royalty concern or individual. Thorough in geology, land and royalties in Mid-Continent. Write your line-up and give phone or address for interview. Box C-915, The Oil and Gas Journal. Tulsa, Okla.

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CHEMICAL ENGINEER, age 37; 15 years' experience in chemicals and oil refining. At present employed by a large refinery in the East. Familiar with modern refinery practice. Permanent connection or contract. Available July 1, 1929. Box C-922, The Oil and Gas Journal, Tulsa, Okla.

GEOLOGIST—Two years field and subsurface experience with major companies in Mid-Continent area. O. U. graduate. Prefer place with small company or individual. Address Box C-921, The Oil and Gas Journal, Tulsa, Okla.

CHEMICAL ENGINEER, 30, single, M.I.T. graduate, five years' refinery process development and design, desires new connection, executive capacity, in refinery operation or engineering. Box C-926, The Oil and Gas Journal, Tulsa, Okla.

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Good Movement in Chicago Contracts

Spot Demand Continues Light With No Changes in Prices Monday. Better Weather Stimulates Consumption

By J. B. Waldo

CHICAGO, May 13.—The market began the week with a very good movement on contracts while the spot demand continued light. There was no change in prices on Monday from the close of last week. U. S. Motor gasoline continued to be quoted at 7⅝ to 7¾ cents with some movement of the material at 7½ cents. A price of 7⅝ cents was named as the lowest price at which Oklahoma material could be purchased out of Group 3 but some outlying plants were making lower prices for their U. S. Motor gasoline, some of which was not up to the full specifications but for which there is a ready market at a price. In fact several marketers stated that while their gasoline sales were light on Monday that good material was just as hard to buy as it was to sell. Better weather was had over the week-end and the consumption locally was very large making the trade hopeful of a better business later in the week. There was little demand for the higher tests but blenders of ethyl gasoline stated that the demand for this material was very good. Kerosene showed more activity and the improvement in the market which was noted during the latter part of last week was in evidence this morning. There was no change in prices but a better business was done.

Next Season's Contracts

The present furnace oil demand is light but dealers are at work on next season's contracts, both with consumers and with local jobbers and state that results are satisfactory. Gas oil contracts for large quantities have been closed with a number of buyers. Some of these contracts call for a scale of prices which are low for the next 90 days but gradually increase with the season. Other gas company buyers are only accepting offers at a price for the entire season and name some low quotations as having been made to them. The chief movement in industrial fuel and gas oils is on contracts, the spot buying being light at the opening of the week although there were a number of inquiries received. Clear and drying weather would be a helpful factor in the situation right now in this market.

Gasoline Consumption Drops

As a result of weather conditions there has been a falling off in the consumption of gasoline and backing up of the material. Sales offices in this city say their customers tell them they have all the gasoline that they can store. Every oil man here is hoping for fair weather to dry up the excess water and make the country roads usable for motor cars. Local consumption is holding up well, even with the temperature too cool for much pleasure driving.

The spot market was only fairly active last week. The bulk of the demand was from smaller jobbers with limited storage who must buy as they sell. Many regular spot buyers who were solicited for orders replied that they were unable to take in any more material until they had moved some of their present storage. Some reported that they had cars on their sidings which they were unable to unload. In one instance the jobber stated that he had eight cars waiting to be unloaded and when the suggestion was made that his demurrage bill would be large he said that his refinery when asked to hold up shipments to give him a chance to empty a tank told him to let the cars come along and they would stand for the demurrage. Tank car men say they are having a better call from refiners who lease their cars and they take this as an indication that refiners are having a better movement. Some of the need for additional tank cars may be because of the slow return of cars by jobbers who are unable to unload promptly because their storage is full.

Holding to Higher Price

The major refiners who last week advanced their price to 7¾ cents are believed to be holding to that price. There has been a good deal of material offered at lower prices, mostly at 7⅝ cents. Sales actually have been made of what is said to be full specification material from Oklahoma at 7½ cents. Both North Texas and Louisiana refiners were in the market for business last week and various buyers for resale stated that they had offers of U. S. Motor material at 7¼ cents, some asserting that the price was on a Group 3 basis and others that it was at the plant, which in case of the North Texas seller would make a price out of the group of a little higher than 7⅜ cents for resale.

Early in the week the market generally was quoted at 7⅝ cents to 7¾ cents for strictly U. S. Motor gasoline, but in the middle of the week quotations were made with a low price of 7½ cents. Some U. S. Motor gasoline was sold here by Tulsa brokers for resale at 7¼ cents, plus the usual $5 per car fee.

One reason the jobbers and dealers are keeping their tanks full is that there is a general expectation of a tank wagon increase. The major distributors in this city have given no sign of advancing their tank wagon quotations to the public but the trade remembers that last year an 8-cent quotation for gasoline was followed by a tank wagon advance and it hopes that the same thing will happen this year. At any rate the refinery price for spot business is advancing, and this means that the material bought at recent prices is increasing in value.

Contract Price No Higher

The contract price, that is the price at which jobbers are billed under their contract, is based on the tank wagon price, and the refinery price on contracts today is no higher than it was months ago except in those contracts which figure a split in the margin. Today under a straight 3½-cent margin based on the normal local tank wagon price, the refiner is receiving materially less than the spot market price nets the refiner. For this reason the refiners are as anxious for a tank wagon advance as the jobber who finds that under the present scale of prices his margin is reduced to a point where there is little profit in the gasoline sales at his stations.

It is understood in this city that the refiners are working on a new form of contracts which it is hoped will correct some of the irregularities found in the forms in use by most refiners.

Several refiners of high quality non-knocking motor fuel report that the demand for this product is up to or in excess of their capacity. Blenders of Ethyl gasoline who are now offering the Ethyl gasoline to distributors state that they are getting a good business from independent distributors in this territory who are able to sell this motor fuel to their customers for the first time this season. As to the higher tests there is still some movement, for some jobbers specialize on the higher gravities. On the whole, however, the demand for the higher gravities seems to have been cut in half. The bulk of the business is in the U. S. Motor grade and so-called Motor gasolines which are not quite up to specifications. Some of this gasoline is off color and some of it has a slightly higher endpoint. Others will not have the full distillation curve.

The West Texas plants are offering their naphthas freely, some of them preferring to let the buyer blend the necessary percentage of natural gasoline.

Bringing Prices Back to Normal

In Ohio and the eastern parts of Indiana and Michigan, conditions are still unsettled, but the Standard Oil Co. of Ohio is gradually bringing prices back to normal, and has advanced the normal price 1 cent a gallon at the station and tank wagon. The Ohio tax is now 4 cents and this makes the station price seem high by comparison with this state, where the new 3-cent tax does not take effect until August 1. There is only a 1-cent spread between the tank wagon and the service station price in Ohio but commercial accounts and dealers are allowed a discount of 3 cents a gallon, which also applies to purchases by public utilities. This peculiar condition as regards retail sales of gasoline has been brought about through excessive competition and no real solution has been suggested. The export demand in this market is light. Natural gasoline has been fairly active.

Kerosene has been moving in a limited way. Offerings have been liberal and prices have suffered accordingly. Although several large refiners are still naming a price of 6 cents or better, the bulk of the business has been done at less than that figure and much of the 41-43 kerosene sold last week was moved at 5¾ cents. There is no present outlook for any material change and prices may drift a little lower or may hold at around the present selling price.

Furnace oils were called for last week owing to the cool, rainy weather over so much of the territory. The orders were all for immediate shipment and when possible cars in transit were desired. Small cars frequently were specified by the buyers. Standard quality 38-40 straw distillate was bought for resale at 3 cents last week and the jobbers usually could be supplied at 3¼ cents from cars which were immediately available. Zero gas oils and all the furnace oils were in about the same position except that the zero gas oils showed less decline than the distillates from the price prevailing during the more active demand.

Gas Oils Offered Freely

Gas oils have been freely offered during the past few weeks, both the straightrun and the recycled variety. There is at present little demand for the straw gas oil and so far as buyers are concerned the prices are practically all in line for the different grades. In part this is due to the offerings of a good grade of gas oil by Texas plants where the cracking capacities are but a fraction of the crude capacity of the plants. There has been only a light industrial demand outside of the takings on contracts and the gas companies are not buying liberally. Many are at present reducing their storage and are even holding up on orders on contracts, asking for smaller quantities to be shipped.

The demand for fuel oil is largely from the industrial users who for the most part are supplied on contracts. There is about the usual amount of buying by those concerns which do not contract and who use oil for power, but the demand for oil for heating is about over. Most of the larger buildings such as hotels, schools, hospitals and apartment houses that use oil for heating are still operating their heating plants, but the quantity of oil consumed is small compared with the consumption during the winter and may stop any day for this season.

Slower Demand for High Gravity Oils

The demand for the high gravity oils for heating has about come to an end but these are not widely offered, being used, it is stated by refiners, for cracking material. The lower gravities, if with a low sulphur content and a low viscosity, are also fairly well held and prices are steady. The heavy industrial fuel oils of the 18-22 gravity are freely offered and if the viscosity is high the prices are tending downward. The high sulphur fuel oils with a low cold test and a fairly low viscosity are just about holding their own although the offerings are free and stocks are ample.

Refiners are firm in their views and are asking the same prices as for several weeks. Buyers are also rather set in their views as illustrated by an incident A refiner had a supply of 18-22 fuel oil, less than 1 per cent sulphur, but with a high viscosity. He found that the material would move at just one price, and that was 50 cents Group 3. At 52½ cents there were no buyers. The 18-22 material with a fairly low viscosity but a high sulphur content is difficult to sell at higher than 47½ cents for a good, clean oil, and some material has been bought for resale as low as 42½ cents and possibly at 40 cents, considering the freight differential.

There is only a light immediate business in refined lubricating stocks, but the demand for the motor oils is good and the consumption, it is believed, will absorb earlier purchases and bring the compounders and tank car buyers back into the market when their contracts are filled. Bright stocks are strongly held at 34 cents for Mid-Continent material. Steam refined cylinder stocks are strong and neutrals unchanged. Demand for industrial specialties is good. The wax market is quiet but there are more inquiries and dealers who have been calling on the consuming trade say that the stocks of the latter are light and that they will be buyers a little later.

Tank Wagon Situation Unchanged

Nothing really new developed in the tank wagon situation during last week. Most local dealers were buying their gasoline for 11 cents delivered in tank wagon lots and some who have facilities for buying in tank cars find that it is just about as profitable to buy on a contract with some refiner on the local tank wagon discount, which is 4 cents off the service station price or 11 cents delivered, as it would be to buy from the refiner at the present spot market. The local contract has the advantage of reducing the investment in both material and equipment and assures a supply with no thought or trouble.

Most dealers can make some money on a 4-cent margin on gasoline and if they can build up sales in lubs and in some other line on the side they do fairly well with little risk involved. The larger jobbers with their many stations and bulk plant can use the tank car shipments, but they are finding that many of their former customers among the dealers are now dealing with the larger local refiners.

There has been a real drive made to sign up the dealer trade and get it on some kind of contract and the same thing is going on all over the territory. Good concerns are being bought out, or signed up on contracts rapidly. Not all the refiners who have trade in this territory are equally active, but some of them are much interested in getting just as many signed contracts as possible.

Lubricants Feature Eastern Markets

Again Advance Sharply Due to Shortage With 61 Cents Low Price on Bright Stocks. Gasoline Prices Firm

By A. E. Mockler
New York Bureau, The Oil and Gas Journal

NEW YORK, May 13.—Further sharp advances in lubricating oil prices, carrying the market to the highest levels attained since the post-war deflation period in 1920-21, were the outstanding feature in East Coast markets this week. The increases have been accompanied by a falling off in volume of trading, but notwithstanding this development, there is still apparently enough buying in the market to take care of current offerings, and sentiment in some quarters appears inclined to the belief that prices will go even higher.

Gasoline markets have firmed up somewhat, in sympathy with the stronger market in other parts of the country, and reflecting a more active demand. Thus far, however, U. S. Motor has not been able to pass the 9-cent mark, at which level Standard Oil Co. of New Jersey is still quoting, although most other sellers are a quarter cent over this level.

There have been no developments of particular importance in the situation with respect to other products, and prices have held steady in most instances.

Tank Car Gasoline

Jobbing demand has shown material expansion during the week, under the stimulus of better weather, and tank car movement is currently running at the highest rate attained thus far in the year. With the exception of Standard Oil Co. of New Jersey, which is quoting 9 cents on U. S. Motor in tank cars at refineries, the market is held at 9¼ cents, with California U. S. Motor bringing a premium of a quarter cent at 9½ cents per gallon. The refiners who are quoting the 9¼-cent price on Motor are talking a 9½-cent market but this of course hinges upon the action which New Jersey takes. It would not be surprising, according to some interests, to see the New Jersey company go to 9½ cents, leading the way in a general upward movement. In such an event, it is indicated, California gasoline here will probably go to 10 cents, widening the differential to a half cent per gallon. A strong market at California refineries, coupled with appreciably higher tanker rates for moving this motor fuel eastward, has made for an unusually strong situation on the California product.

Tank Wagon Gasoline

Thus far, refiners report, there is no indication that the 2-cent state tax on gasoline sales which became effective May 1 has had any influence upon the demand. Consumption throughout the entire East Coast territory this week has shown a sharp gain, largely as a result of the better weather which we have been having. For the first time in more than a month, New York has witnessed several consecutive days without rainfall, and with warm, sunny weather at hand, motoring has increased enormously. Refiners are of the opinion that the worst of the spring season is behind them, and that from now on a steady acceleration in the rate of consumption can be anticipated.

Tank wagon markets are fairly well maintained throughout the territory, with the exception of several points in upstate New York and in New England, where prices are under the general parity due to the strong local competition which has developed with the advent of new interests into the marketing picture. It is expected that this condition will probably be more or less of a fixture over the entire summer marketing season, unless the market for gasoline at refineries should show a sharp increase within the next two months.

There is still a rather wide spread in the retail price basis in New York City territory, where gasoline is posted at the pumps all the way from 17 cents to 21 cents per gallon. A number of small independent companies are underselling the larger interests in an effort to get established in this market.

An interesting development this week, from the marketing standpoint in New York City, was the breaking of the alleged monopoly on the sale and use of gasoline tank trucks in New York City. For the past two years the fire department has been licensing only one make of truck for tank wagon gasoline deliveries in the city, and several of the other manufacturers have been combating this monopoly. The fire department this week granted Standard Oil Co. of New York a permit for the use of a competitive make of truck, and other types are expected to be approved in the event that they make the slight modifications in design demanded by the fire department officials.

Kerosene

Tank car business has been rather quiet this week, and the market is slightly easier than during recent weeks. Warmer weather has cut demand considerably, and jobbers are not ordering forward additional supplies in large volume. All of the principal sellers are now quoting water white at 8 cents per gallon, and it is probable that this price could be shaded slightly in some quarters.

No change has developed in the tank wagon market. Marketers report that there has been a seasonal slackening in the volume of business, but the market remains steady at 15 cents per gallon. Refiners expect business to pick up again in about a month, when the demand from the summer resort centers starts.

Lubs

It is still a "runaway market" on cylinder stocks, and further advances have been attained this week on several grades. The market advance has now reached the point where very definite buying resistance has developed in some quarters, however, and operators are proceeding very cautiously, anticipating a reaction in the near future. In some quarters, however, sentiment continues bullish, being backed up by the statement that there is not enough Pennsylvania lub production to take care of the demand and that prices are due to climb higher. Bright stocks on spot are held at 61 to 63 cents per gallon for the dark, and 63 to 65 cents for the light, with but little moving at these figures, however. On 600 Oil City E, the market is up 2 cents at 42 to 44 cents a gallon, with Warren 600 E showing a corresponding gain at 43 to 45 cents per gallon. Quotations on other grades remain at last week's levels, although the market is virtually a nominal affair, depending upon the urgency of the buyer's requirements to a great extent. This is particularly true of 600 flash and 630 flash stocks.

Thus far, the market for pale and red oils has failed to share in the general upward movement, and quotations this week remain unchanged at the levels which have prevailed for some weeks past. Refiners report a moderate improvement in buying, but nothing to compare with the recent trading in cylinder stocks.

Export buyers appear to have covered their more urgent requirements of cylinder stocks, and there has been a definite letdown in the demand from this quarter during the week. A number of domestic consumers, however, evidently overstayed the market, and these buyers are being forced in for stocks to take care of their immediate requirements. It is this buying which is such a factor in sustaining the market at present levels. Notwithstanding the fact that many compounders and blenders are virtually down to buying on a day-to-day basis, their buying is absorbing the bulk of current output.

Fuel Oil

Bunker "C" remains steady at $1.05 per barrel, bulk f.o.b. local refinery terminals, and $1.10 a barrel barged alongside within the harbor limits. Contract movement with marine interests is well sustained, and refiners report that stocks are moving out readily. Reports of a pending accord among producers in Venezuela, whereby crude production will be cut to 1928 levels, have tended to create a somewhat better feeling in fuel oil circles, and further developments in this direction will be awaited with interest. Notwithstanding definite efforts on the part of East Coast refiners to hold down output of fuel oil through the greater utilization of cracking equipment, current production is still running in excess of the demand, and the statistical position of the market is far from firm. Thus, while leading interests have been making an effort to stabilize the situation to the point where fuel oil will command a price somewhat in line with other products, continued overproduction of bunker "C" has militated against the success of such a movement.

Industrial consumption of fuel oil is holding up well, with the industrial trade inclined to "shop" the market rather thoroughly when buying spot stocks in an effort to bring to light off-priced offerings. The larger East Coast interests, as a rule, are holding firm at the $1.05 level, but it is reported that it is possible to shade this figure in one or two instances on relatively small lots for domestic industrial consumption.

Gas Oil

The market range continues 5 to 5½ cents per gallon on gas oil in the Bayonne market. Demand is still rather indifferent, but contract withdrawals are holding up fairly well for this season of the year. The advent of daylight saving has as usual been accompanied by a drop in the use of gas in metropolitan territory, and this development is being reflected in a further slackening of buying of gas oil on the part of the large artificial gas companies.

The leading refiner continues to hold the market at 5½ cents per gallon, with other interests offering out the same grade at a half cent under this figure. Refiners are not offering straightrun gas oil for sale, but are confining their marketing operations to recycled stocks, holding all of their straightrun for their own cracking operations. It is reported that some of the interests in this market have accumulated fair supplies of the straightrun product for cracking over the summer months.

Diesel Oil

Steadily increasing consumption of Diesel oil by marine interests is reported here, and refiners are speeding up production to cover this larger volume of sales. The market position continues well sustained, with most of the principal refiners here quoting $2 per barrel, in bulk at refinery terminals, with one interest still asking 10 cents per barrel over this figure.

Staistically, the Diesel oil market position is much sounder than is the case with bunker "C." There are no burdensome accumulations of the former oil at any East Coast refinery terminal, and production has been gauged to the point where the output is moving readily into consuming channels.

A number of the larger companies are carrying fairly substantial amounts of contract business on their books, and these totals are being increased regularly as new Diesel-powered vessels enter the New York run.

The Northern Prince, of the Furness-Prince Line, started her initial voyage from New York this week. The ship is a motor-driven vessel of 11,200 tons, and will be in the New York-South America run.

The French motor liner Lafayette was successfully launched this week at St. Nazaire. This vessel is the first motor liner constructed by the French Line for the New York-Havre service. She is of 21,500 tons and driven by four powerful M.A.N. motors developing 20,000 horsepower.

All of this new motor liner construction means increased volume of Diesel oil sales by refiners operating in New York harbor, and the refining interests have already made their plans for handling this volume.

Petrolatum

A stronger feeling has developed in the petrolatum market at refinery points, but thus far there have been no increases in the spot market position. General firmness in other products, notably lub oils, have apparently given some producers of petrolatum stronger ideas regarding values, and jobbers report that there is a tendency among some sellers to endeavor to work values to higher levels. There has been a slight pickup in the demand for white grades this week, domestic buyers being in the market for prompt shipment stocks in a larger way. The lower grade product has also sold in more substantial volume, dark green moving in a fair way for shipment abroad at 1 cent per pound at refineries, and 2 cents per pound in barrels, carlots, f.o.b. Bayonne.

Paraffin

Fully refined grades have come in for slightly better buying this week, and the market position is a little improved. Thus far, however, the improvement has not been sufficient to bring about any upward reaction in the price basis. Demand for 135-137 a.m.p. at 6¾ cents per pound is more active, however, domestic consumers being inclined to stock ahead somewhat at this level. The lower melting points are still moving in but a limited way, both for domestic consumption and for shipment abroad. Crude scale is showing some softness, but no further price recessions have developed.

There are still a few weak holders of spot paraffin, both here and in Gulf territory, but these sellers are being cleaned out of surplus holdings by jobbing inquiry which has developed during the week. Jobbers in some instances, it is reported, are anticipating an upward trend in the market, and there has been a little speculative operation in cases where stocks were available at material concessions for prompt disposal. Refinery holdings in the Pennsylvania field are reported rather heavy, but due to the very materially higher prices which Pennsylvania refiners are now receiving on their cylinder oil sales, there is more disposition being shown by these refiners to hold their own wax surplus for a turn in the market.

Export Markets

Buying of gasoline for shipment abroad has again slackened off this week. An inquiry for a 3,800-ton cargo of 64-66 is reported at the North Atlantic, with

(Continued on Page 141)

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Natural Gasoline Manufacture

EXPLAIN TYPE AND CARE FOR PLANT GENERATORS

By R. H. Cobb
Columbian Gasoline Corp.*

There are several types of alternators, or alternating current generators. There are revolving armature alternators, wherein the armature revolves and the field magnets are stationary. Revolving armature machines are now ordinarily manufactured only for capacities of less than about 30 K.V.A. revolving field alternators where both field magnets and armature are stationary and iron cores revolve between the armature core and the field magnet poles. Modern alternators of moderate and large capacity are practically all of the revolving field type because the stationary armature offers better opportunity for insulation and a high voltage is not necessary on the collector rings.

The construction of turboalternators; that is, alternating generators arranged for steam turbine drive, is somewhat different from that utilized for machines which are to be driven at moderate speed. However, these always revolving field steam turbine machines, if they are to develop their maximum economies, must operate at high speeds and it follows that generators which are to be driven directly by them must be capable of operating at the same speeds. Speeds of 1,200, 1,800, 3,600 R.P.M. are frequently encountered in practice. These machines ordinarily require forced ventilation, since the motors revolve so rapidly they must be of very secure construction. For small and medium capacity machines the field structure is machined from steel. The field core for the large machines is assembled from discs cut from steel slabs or plates.

The revolving armature alternator in general are quite similar to direct current generators, except that collector rings are substituted for the commutator. The field must be excited with direct current for which an independent small direct current generator is ordinarily required.

Frequently the exciter armature winding is wound on the same core with the alternator winding and a separate commutator provided for it. With such an arrangement, or when an independent exciter is direct connected to the alternator, the revolving armature alternator is then self-contained. General figures for the capacity of an exciter for any machine runs from 5 per cent of the capacity of the alternator for moderate speeds and small sizes to .5 per cent of the alternator capacity or a trifle less for large high speed turbine units. Two per cent is a value commonly used in the absence of definite data.

Field discharge switches and resistors should be provided for automatically discharging the field circuit of alternating current generators when the field switch is opened. If such provisions is not made the high E.M.F. of self induction developed when the switch is opened, is liable to puncture and possibly ground the field winding of the machine.

*Plant operators meeting.

NEW LOUISIANA PLANT

A 5,000 gallon gasoline plant and a carbon black plant capable of producing 20,000 pounds daily will be erected by the International Gas Products Co., Inc., in Richlard parish, Louisiana. Gas from the surrounding fields will be run at the plant. The plants are expected to be ready for operation by September 1. J. H. Mann has been made president of the new company and will be actively in charge of the construction and operation of the plants. Enough wells will be drilled in addition to those producing to give the plant an adequate supply of gas.

LARGE CALIFORNIA DELEGATION TO ATTEND ANNUAL TULSA CONVENTION

With a large delegation from California assured, preparations have been made for a record attendance of natural gasoline manufacturers at the Eighth Annual Convention of the Natural Gasoline Association of America, which will be held at the Mayo Hotel, Tulsa, May 21, 22 and 23.

George L. Ratcliffe, president of the California Natural Gasoline Association, and other officers, will head a delegation of forty to fifty West Coast manufacturers who will arrive in Tulsa for the opening day of the convention. California manufacturers, several of which are members of the Natural Gasoline Association of America, have expressed great interest in the three-day program, which will be devoted largely to technical papers and the discussion of subjects of special interest to plant operators. Mid-Continent and California operators are particularly interested in the report of Dr. G. G. Brown of the University of Michigan, who heads the association's research department.

The Natural Gasoline Supply Men's Association will provide entertainment on a more elaborate scale than ever before. J. E. Satterwhite of Tulsa, president of the association, has appointed several committees who will have charge of the entertainment features. The chairmen are P. P. McKirahan, D. W. McKay, M. F. Waters and W. A. Schleuter. The supply men will provide dutch lunches on each of the three days of the convention, a stag smoker on Tuesday and the annual dance on Thursday evening. The annual election of officers for the Supply Men's Association will be held on the second day. Present officers in addition to Mr. Satterwhite are W. A. Schleuter and M. F. Waters, vice presidents, D. W. McKay, treasurer, and Ray E. Miller, secretary.

H. C. Charles of the Phillips Petroleum Co. instead of J. C. Sands of the same company as previously announced will present the paper on "Is Present Gasoline Storage Adequate to Best Service the Industry?"

Following is the revised program for the three-day convention:

Tuesday, May 21—Morning Session

F. L. Chase, Lone Star Gas Co., chairman.

Welcoming address, F. L. Chase.

President's address, H. A. Trower, Phillips Petroleum Co.

Appointment of committees.

Report of standing committees.

Noon

Dutch lunch, furnished by Natural Gasoline Supply Men's Association.

Afternoon Session

Paper, "A Review of Fires and Explosions That Have Occurred in the Industry Over the Past Few Years," Emby Kaye, Skelly Oil Co.; H. M. Coulson, Sinclair Oil & Gas Co.

Discussion.

Paper, "Procedure Necessary to Manufacture and Ship Gasoline Acceptable to the Existing Natural Gasoline Market," A. T. Scherer, Sinclair Oil & Gas Co.;

H. A. Trower
Phillips Petroleum Co., who has served Association as president since 1927.

S. B. Crooks, Empire Oil & Refining Co.

Discussion.

Paper, "Repressuring and Its Effect on the Natural Gasoline Industry," Edward V. Foran, Saxet Oil Co.; E. F. Guidinger, Phillips Petroleum Co.

Discussion.

Evening

Stag smoker, furnished by the Natural Gasoline Supply Men's Association.

Wednesday, May 22.—Morning Session

D. E. Buchanan, Chestnut & Smith Corp., chairman.

Progress Report on the Research Program of the Natural Gasoline Association of America, Dr. George G. Brown, University of Michigan.

Noon

Dutch lunch, furnished by Natural Gasoline Supply Men's Association.

Afternoon

Continuation of report by Dr. George G. Brown.

Discussion, led by D. E. Buchanan as chairman of the session.

Thursday, May 23.—Morning Session

A. J. Schlosser, Barnsdall Oil Co., chairman.

Paper, "Gasoline Storage Practice in

(Continued on Page 149)

A PRACTICAL SUGGESTION

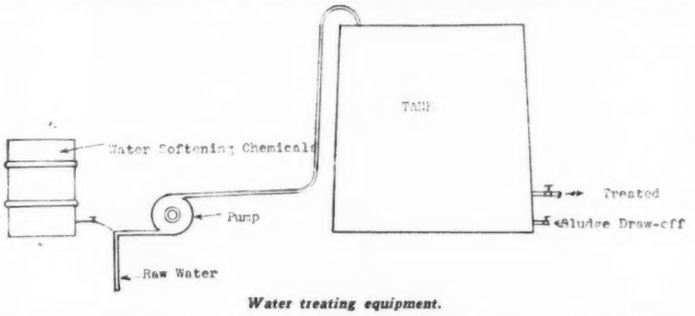
WATER SOFTENING

Obtaining a suitable water for many gasoline plants is often an aggravating problem. In addition to the deposition of boiler scale which occurs in other technical work, the gasoline industry is further handicapped in using hard water by engine and compressor jacket scale, deposits in dephlegmators, cooling coils and water enter coolers. The usual oil field scale is very coherent and is a poor conductor of heat.

In some cases, the operator is unable to install the modern water softening equipment, and in such cases he can materially lessen his plant troubles by the use of the following method:

The equipment includes a pair of scales, a metal drum or barrel, a suitable water pump and a tank of sufficient size to take care of a day's supply of make-up water. An accurate complete chemical analyses should be made, to determine the amount of chemical necessary, and then after softening operations are started, the process may be controlled by means of a standard soap and acid solution. These tests are comparatively simple and can be made by the plant operator.

The required amount of lime and soda ash is mixed in the metal drum or barrel, which is connected to the suction side of the raw water pump. The chemicals in this manner are mixed with the raw water which is pumped to the settling tank. The settling time for this process should be approximately 24 hours. This simple method of water treating can be expected to lower the average shallow ground water or surface water to 2 grains of hardness per gallon.



Water treating equipment.

The chemical cost of water softening depends, of course, upon the amount of mineral matter to be sludged out. Some of the surface waters of approximately 40 grains hardness can be treated for a cost of 5 to 7 cents per 1,000 gallons, whereas many of the surface waters of only 5 to 7 grains of hardness can be handled for costs around 0.6 to 1.5 cents per 1,000 gallons. Approximate chemical costs are as follows: Lime $0.85 per hundredweight, and soda ash $1.95 per hundredweight.

Practical suggestions by those connected with the construction and operation of natural gasoline plants are invited. Payment will be made as soon as suggestions are accepted. Address all communications to the Natural Gasoline Department, The Oil and Gas Journal, Tulsa.

HUMBLE BUILDING PLANT

The Humble Oil & Refining Co. has started work on the construction of a natural gasoline plant in the Salt Flats Pool ot Caldwell County, Texas. The plant which is located 5 miles north of Luling will have an initial capacity of 10,000 gallons daily. It will be completed in about three months.

The Humble company has production in the Salt Flats Pool and has contracted for the gas from other leases. The company has made locations for approximately 20 additional wells.

Brief Items for Petroleum Refiners

Average Gravity of Crude Oil in United States 32.2 A.P.I.

The average gravity of the crude petroleum produced in this country was found to be 32.2 degrees A.P.I., or 0.864 in terms of specific gravity, as the result of a survey recently conducted by the United States Bureau of Mines, Department of Commerce. This compares with an average gravity of 32.0 degrees, recorded as the result of a similar study made by the United States Geological Survey in 1921.

To one who is accustomed to thinking of crude petroleum in terms of Oklahoma-Kansas and North Texas crudes it may be surprising that the average gravity for the entire country is no higher than 32.2 degrees, the Bureau of Mines points out. The chief reason for this apparent discrepancy lies mainly in California production, which amounted to over 25 per cent of the total, but which has an average gravity of only 24.1 degrees. A factor of less importance was Arkansas, which, though on the decline as a producing state, exerted a material effect by reason of its average gravity of 21.6 degrees, the lowest for any state. In view of the heavy production of light crude in the Seminole area of Oklahoma during the period studied, it would ap-

(Continued on Page 149)

LEMONT REFINERY SOLD TO I. A. O'SHAUGHNESSY

CHICAGO, May 14.—The plant of the Lemont Refining Co. located at Lemont, Ill., has been purchased by I. A. O'Shaughnessy of St. Paul and associates according to reports in local trade circles. Mr. O'Shaughnessy has been a prominent independent refinery operator for several years. At present he is the head of the Globe Oil & Refining Co., operating a refinery at Blackwell, Okla., the Globe Oil & Refining Co. with a refinery at Cushing, Okla., and the Northwestern Refining Co. with a refinery at Tonkawa, Okla.

G. G. Woodruff, who recently resigned as vice president of the Shell Petroleum Corp., will be associated with Mr. O'Shaughnessy in the project according to reports here.

The Lemont refinery was built several years ago but in recent years has not been operated consistently. It has a 1,500-bbl. skimming capacity with one unit of the Donnelly cracking process. The plant is owned by C. B. Shaffer. It is understood that the new owners expect to obtain their crude oil supply from Michigan fields.

TO VISIT STANDARD PLANT

Eastern refinery operators will visit the refinery of the Standard Oil Co. of Ohio at Cleveland, Ohio, on Friday, May 24. The trip is being arranged under the auspices of the department of manufacture of the National Petroleum Association. P. S. Tarbox, general manager of the Independent Refining Co., Oil City, Pa., is in charge of the department. Those desiring to visit the plant are requested to advise Mr. Tarbox.

WILL DISTRIBUTE HAVOLINE OIL

CHICAGO, May 11.—It is announced by the Indian Refining Co. that the Henry H. Cross Co., of California recently incorporated as a subsidiary by the Henry H. Cross Co., of Chicago will act as the coast distributor for Havoline motor oils. The office of the new company is at 416 South Olive Street, Los Angeles.

MAY MOVE GASOLINE AS WELL AS CRUDE FROM COAST BY PIPE LINE

By A. E. Mockler

NEW YORK, May 11.—Something entirely revolutionary in the utilization of otherwise practically unused pipe lines will develop in eastern territory if experiments which are now being conducted by Standard Oil Co. of New Jersey show the expected results. The New Jersey company has been running gasoline from its Bayonne refinery into interior markets through the line of the Tuscarora Pipe Line Co., formerly one of the links in the chain of pipe lines moving crude oil from the Mid-Continent area to the Atlantic Coast refining zone. With the development of heavy production in West Texas and South America, and the movement of this crude by tank steamer to eastern refinery terminals, the network of pipe lines covering the eastern area, and linking up with the Mid-Continent lines, has fallen into general disuse in recent years.

Standard Oil Co. of New Jersey, it is expected, will develop to a practical point the shipment of gasoline from its main refinery to bulk stations to be established along the Tuscarora line in the States of New Jersey and Pennsylvania.

The Tuscarora Pipe Line Co. operates a line running 595 miles in all, running from Bayonne through New Jersey and Pennsylvania to the Pennsylvania-Ohio border, where it connects up with the Illinois Pipe Line Co., which in turn hooks up with the Prairie line at the Illinois-Missouri border. At the close of 1926, Tuscarora showed a total investment of $6,700,000 in its lines. The company in that year moved a total of 3,000,000 bbls. of crude, but since that time the line has been but little used. With an estimated capacity of 25,000 bbls. per day, the company's lines could be utilized for moving more than 1,000,000 gallons of gasoline per day from the Bayonne refinery district to bulk distributing stations in New Jersey and Pennsylvania.

Standard Oil Co. of New Jersey is the leading factor in the gasoline market in its home state, and during the past few years has been developing a heavy volume of business in Pennsylvania, formerly considered as Atlantic Refining Co. territory. The New Jersey company has developed its operations in Pennsylvania to such an extent that it has organized Standard Oil Co. of Pennsylvania, a subsidiary company, to handle its marketing operations in the Keystone State.

Should the company proceed, as is expected, with its plans for developing the movement of gasoline from refineries direct to bulk stations via pipe line, it is conceivable that the position of Standard Oil Co. of Pennsylvania as a gasoline marketer would be greatly strengthened. Just what economy can be effected through moving gasoline via pipe line, rather than by tank car, is something which only the New Jersey company is at present in position to state, but considering the fact that the $6,700,000 invested in the Tuscarora lines is otherwise frozen capital, it can be seen that utilization of these lines for moving gasoline would effect a marked economy in distribution. The cost of moving gasoline from refinery to jobber's bulk station in the East Coast territory figures about 1 cent per gallon, on the average, or 42 cents a barrel. It is believed that the Standard Oil Co. of New Jersey can beat this figure by making pipe line deliveries to its own bulk terminals, and in addition will effect many other advantages which the railroads are not in position to offer. Economy in the matter of handling alone is a not inconsiderable item in this connection, while promptness of deliveries is also an important factor.

Crude Oil Movement

Another development in the pipe line situation in the East which has aroused widespread interest in the trade is the report that the National Transit Co., which for the past year or more has been running West Texas crude from its Philadelphia terminal inland to Franklin, Pa., refineries, is planning to extend its movement of this oil, and will shortly start shipping West Texas crude from the port of Philadelphia to Pittsburgh refineries. Up to this time, it is understood, the line has been moving about 3,500 bbls. daily from Philadelphia to Franklin, and is now expected to move an equal quantity to Pittsburgh. Ultimately, it is expected in trade circles here, it is logical to presume that the line will carry West Texas and possibly South American oil from Philadelphia to refining points as far inland as Cleveland, Buffalo and Oil City.

J. D. WRATHER TO BUILD REFINERY AT MUSKEGON

J. D. Wrather, president of the Amarillo Producers & Refiners Corp., and president of the Del Rio Refining Co., has announced his company will build a 3,000-bbl. plant at Muskegon, Mich., in the near future. Contracts have been closed with the Swastika Oil & Gas Co., producers in the Muskegon Field, for a crude supply, much of which will come from the Dundee sands.

Because of the high sulphur content of the crude and the difficulties in refining it by the ordinary methods, a modification of the company's Del Rio, Tex., skimming plant will be constructed. Gasoline, kerosene, naphthas, gas oils and fuel oils will be made. Construction of the new plant will begin immediately as most of the contracts for the work have been let. The company is operating a 3,000-bbl. plant at Pyote, Tex., and one of the same capacity at Del Rio, Tex.

WEWOKA REFINERY WILL START IN THIRTY DAYS

The skimming plant which the Wewoka Refining Co. is building at Wewoka, Okla., will be completed and ready to operate in 30 days, according to E. A. Halley, vice president of the company. A pipe still and two shell stills are being installed and it is expected that the plant will have a capacity of 2,000 bbls. daily. Crude oil will be secured from the Greater Seminole area by pipe line and tank car.

James E. Dunn of Tulsa is president of the company. Earl Dunn is secretary. Mr. Halley is in charge of plant construction and will operate the plant.

TO START CONSTRUCTION

CHICAGO, May 13.—All plans for the construction of a 3,000-bbl. refinery at Muskegon, Mich., by the Old Dutch Refining Co. have been completed according to E. L. Hughes of this city who has been active in the promotion of the project and who is an officer in the newly formed company. Mr. Hughes is the head of Hughes & Co., a marketing organization of this city. This company it is stated will not be connected with the refinery project.

The company will pay Mid-Continent prices for Dundee sand crude. The plant will be ready to operate in the early fall.

SHIP MUSKEGON OIL BY BOAT TO WHITING

CHICAGO, May 11.—The Standard Oil Co. of Indiana has completed arrangements for the purchase and delivery of approximately 8,000 bbls. of crude daily from the Muskegon Field by tanker "Penoil," to Whiting. The "Penoil" has a capacity of 16,000 bbls. and will make a round trip each two days. Shipments will begin as soon as the equipment for loading has been completed which should be very shortly.

The "Penoil" was formerly in the service of the Pan-American Petroleum Corp. and has been brought to the lakes for this service. The Muskegon production has been increased during the week by the bringing in of two wells of good initial capacity and it is stated that the potential capacity of the wells already drilled is upwards of 20,000 bbls. daily. The present shipments are about 4,000 bbls. daily. Other refiners are figuring on shipping crude from this field largely by lake transportation.

RICHFIELD CO. AWARDED NAVY FUEL CONTRACTS

NEW YORK, May 13.—The Richfield Oil Co. has been awarded contracts for supplying the Navy with 4,665,000 bbls. of fuel oil in 12 months beginning July 1. Barrelage includes delivery of 3,500,000 bbls. at San Pedro; 1,000,000 at San Francisco; 30,000 at Portland, Ore.; 60,000 at Puget Sound Navy yard, and 75,000 at Seattle. The Richfield company has constructed additional bulk storage at Portland for handling increasing fuel oil business and plans the erection of new bulk storage at Seattle.

FIRE AT VACUUM PLANT

NEW YORK, May 11.—Damage of $50,000 was caused at the Bayonne plant of Vacuum Oil Co. yesterday by fire and an explosion of a tank containing 63,000 gallons of naphtha. The explosion scattered blazing oil over four other nearby tanks and ignited them.

Five fire companies from Bayonne, three fire tugs, and several fire fighting units from Standard Oil Co. of New Jersey and other neighboring refineries aided the Vacuum's fire department in fighting the blaze. The cause of the fire was not determined.

STANOLIND II, IN SERVICE

CHICAGO, May 11.—The new airplane of the Standard Oil Co. of Indiana arrived in this city today on its first trip. It was flown from Detroit where it met the officials of the company who had been on a visit of inspection to the plant of the Midwest Refining Co., at Casper, Wyo. The plane is a giant trimotored Ford all-metal plane and succeeds Stanolind I, which has been sold.

NEW MANAGER AT MINNEAPOLIS

CHICAGO, May 11.—R. R. Risser is the manager of the Minneapolis division of the Marland Refining Co., succeeding Charles Chapin, who has returned to Chicago as manager for the Wilson Oil Co. The offices have been moved from the Minnesota Transfer Building to the new Foshay Tower.

INCREASES CAPITAL STOCK

CHICAGO, May 11.—The Consumers Petroleum Co., distributor of fuel oils and petroleum products with offices at 360 North Michigan Avenue, has increased its capital stock from $20,000 to $50,000.

LUBRICANTS FEATURE THE EASTERN MARKETS

(Continued from Page 137)

the sale expected to be made out of New York or Philadelphia at the Gulf basis, with the usual freight differential adjustment. This cargo is for shipment to France. Several other inquiries for motor fuel for shipment to France are understood to be pending, but thus far they have not been put out. Owing to the fact that many of the large eastern refining organizations now have marketing subsidiaries in England and France, or else have arrangements with marketing companies in those countries for regular distribution, it is not expected that the volume of open market trading in motor fuel this summer will show the usual expansion. Since the advent of the Petroleum Export Corporation, however, export markets for gasoline have shown a high degree of stabilization.

Kerosene has continued rather sluggish in export channels. Inquiry for bulk stocks has been confined to rather small quantities, and cargo transactions have been conspicuous by their absence. With the domestic market somewhat inclined to easiness, it is believed that export buyers are holding off the market in anticipation of lower prices later on in the season. Quotations on cased kerosene continue withdrawn, but it is reported that cased stock marketers are doing a fairly substantial volume of export business.

Some curtailment in the demand for cylinder stocks for shipment abroad has developed this week. The further price advance put into effect on several grades has brought about a situation where export buyers are unwilling to proceed further. Sales during recent weeks for shipment abroad have been rather large, however, and it is believed that many export operators now have sufficient stocks moving against these old orders to take care of their requirements for some weeks to come. Under these circumstances, therefore, it is but natural that buyers should remain out of the market for the time being to thoroughly test out the new price basis of the refiners.

Charter Market Firm

A firmer market for tanker tonnage for movement of gasoline east from California has developed, with the current rate ranging from $1 to $1.05 per barrel. Until the East Coast gasoline market strengthens further, this is likely to slacken off open market trading. On crude oil tankage from the Gulf to North of Hatteras, the market still holds at about 20 to 22 cents per barrel, with apparently plenty of tonnage available, particularly for crude for shipment from Venezuela to North Atlantic ports in the United States. There has been no appreciable change in the trans-Atlantic market.

Petroleum Exports

The following table shows principal exports of petroleum and refined petroleum products from New York during the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	May 4	Apr. 27	Apr. 20
Gasoline	1,537,200	250,000	138,000
Naphtha	1,041,900	160,100	1,720,000
Kerosene	675,100	201,300	83,000
Fuel oil	20,000	21,400	37,500
Lubricating oil	1,649,200	1,771,600	2,460,400
Petroleum, refined	4,286,000	798,200	3,070,400
	Pounds		
Petrolatum			
Paraffin wax	873,700	780,000	1,627,500
Refined		115,000	226,200
Scale	277,000	102,000	75,000
Lubricating grease	1,150,400	1,040,600	1,290,600

Export movement of refined petroleum, which classification embraces principally gasoline and naphthas, showed a sharp gain during the week ending May 4, totaling more than the aggregate foreign shipments of the two previous weeks. The marked gain was attributed to heavier foreign shipments on the part of large refining interests with foreign marketing subsidiaries, and did not come about through any increase in the activity in the open market here. Reports from principal refining interests in the New York area indicate that further heavy shipments are scheduled for the next several weeks, and it is expected that the movement of these products into foreign consuming channels through the local port will run considerably ahead of 1928, notwithstanding that a larger percentage of the foreign buying power of gasoline and naphthas is now believed to be reaching sellers at the Gulf and in California.

Imports

Imports of crude and refined oils at the principal United States ports for the week ended May 4 totaled 1,792,000 bbls., a daily average of 256,000 bbls., compared with 2,012,000 bbls., a daily average of 287,429 bbls., for the week ended April 27. Details follow:

	42-gal.bbls.
At Atlantic Coast Ports—	
Baltimore	190,000
New York	876,000
Philadelphia	315,000
Others	213,000
Total	1,594,000
Daily average	227,714
At Gulf Coast Ports—	
Galveston district	69,000
New Orleans and Baton Rouge	129,000
Total	198,000
Daily average	28,286
At all United States Ports—	
Total	1,792,000
Daily average	256,000

Included in the week's receipts at New York were the following shipments:

To Gulf Refining Co., 93,000 bbls. on the Cities Service Toledo from Las Piedras and 27,000 bbls. on the Catatiombo from Las Piedras.

To Standard Oil Co. of New Jersey, 112,000 bbls. on the F. H. Hillman from Mamomal.

To Mexican Petroleum Corp., 72,000 bbls. on the Harold Walker from Aruba, 66,100 bbls. on the Frederic R. Kellogg from Aruba, and 88,200 bbls. on the Cerro Azul from Aruba.

To Tidewater Oil Co., 67,700 bbls. on the Vimira from Curacao and 90,000 bbls. on the W. F. Humphrey from Las Piedras.

To Asiatic Petroleum Co., 80,900 bbls. on the Swiftlight from Curacao.

To Barber Asphalt Co., 76,600 bbls. on the Agwimars from Las Piedras.

California Oil Receipts

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended May 4 totaled 442,000 bbls., a daily average of 63,143 bbls., against 408,000 bbls., a daily average of 58,286 bbls. for the week ended April 27. Details follow:

	42-gal.bbls.
At Atlantic Coast Ports—	
Baltimore	128,000
New York	234,000
Others	80,000
Total	442,000
Daily average	63,143

There were no receipts of California oil at Gulf ports during the week.

Total distribution of California oil receipts is as follows:

Gasoline	362,000
Kerosene distillate	80,000

KANSAS FIELDS

(Continued from Page 44)

Section 29-25-4, is a dry hole at 2,684 feet.

Coffey County

Sheedy and others' No. 1 Niver, SW cor. SE SE, Section 6-22-14, is drilling at 1,775 feet.

Cowley County

Independent Oil & Gas Co. and Vickers Petroleum Co.'s No. 3 Youle, NW cor. NE NE, Section 16-32-4, is a rig moving in. Kentucky Nitrogen & Oxygen Co. has a machine on location for No. 6 Dabson, SE cor. NE NE, Section 24-33-6. Location has been made for No. 1 Day, NW cor. NE, Section 24-34-6.

Dickinson County

Hiatt & Durham made location for No. 1 Wendt, NW cor. Section 17-16-2.

Elk County

Elk Petroleum Corp. made location for No. 9 Kayser, NW cor. NE NE, Section 9-30-9.

Ellis County

Atlantic Oil Producing Co.'s No. 1 Wagner, C SE SE, Section 35-15-16w, is dry and abandoned at 3,507 feet.

Greenwood County

Davis, Hazlett and others moved a machine to the location for No. 1 Pixlee, NE cor. SW, Section 10-22-10. Henderson & Holden's No. 2 Pixlee, SW cor. NE, Section 10-22-10, is spudding. Phillips Petroleum Co. made location for No. 3 Pixlee, SE cor. NW, Section 10-22-10. Mohawk Oil & Gas Co.'s No. 1 Essick, NW cor. NE SW, Section 7-27-11, has been completed for 50 bbls. in sand at 1,901-09 feet.

Harvey County

Helmerick & Payne's No. 1 Schmidt, SW cor. NE SW, Section 2-22-1, is dry and abandoned at 3,420 feet.

Marion County

Darby Petroleum Corp.'s No. 1 Nickle, NE cor. SE, Section 12-19-2, made a 300-bbl. well in Viola lime at 2,814-30 feet. No. 2 Nickle, NW cor. SE SE, Section 12-19-2, is producing 80 bbls. from Viola lime at 2,844-64 feet. Shell Petroleum Corp.'s No. 1 Funk, NW cor. SW, Section 7-19-3, made 300 bbls. in Viola lime at 2,803-17 feet.

McPherson County

McPherson Oil & Development Co.'s No. 1 Ritz, NW cor. SE SW, Section 1-20-2w, is drilling at 822 feet. Helmerick & Payne's rig is up for No. 1 Klassen, SE cor. NE NE, Section 14-21-1w.

Phillips County

Watsonian Oil Co.'s No. 1 Merklein, NE cor. SW, Section 21-3-19w, is a dry hole at 4,071 feet.

Russell County

Liggett and others' No. 1 Gibbs, NW cor. Section 20-12-15w, is rigging up. Phillips Petroleum Co.'s No. 1 Solback, SE cor. NW, Section 32-12-14, is drilling at 950 feet. Allison & Fitzwilliams' No. 1 Mahoney, NW cor. SE, Section 5-14-12w, is drilling at 1,130 feet. The Prairie Oil & Gas Co. and T. B. Slick's No. 1 Sellins, SW cor. NE, Section 36-15-13w, is dry and abandoned at 2,445 feet.

Saline County

Jones and others' No. 1 Robertson, NW cor. SW, Section 27-14-2w, has been abandoned at 3,587 feet.

Sedgwick County

Bu-Vi-Bar Petroleum Corp. is erecting the rig for No. 6 Carr, NE cor. SE SE, Section 1-26-1w, Valley Center area. No. 5 Wright, NE cor. SE NE, Section 12-26-1w, is a rig going up. No. 6 Wright, NE cor. Section 12-26-1w, is a location. Bu-Vi-Bar Petroleum Corp. and others' No. 6 Shawver, NE cor. NW NW, Section 7-26-1e, is a rig. The rig is being built for No. 8 Shawver, NW cor. SW NW, Section 7-26-1. Simmons & Canary's No. 1 Scott, NE cor. NW NE, Section 22-26-1, is a rig under construction. Gypsy Oil Co.'s No. 1 Hammant, SW cor. NW, Section 14-26-2, is drilling at 500 feet. No. 2 Hammant, NW cor. SW, Section 14-26-2, is drilling at 400 feet.

Foster & Deal and others moved the rig in for No. 1 Townsite, Lot 24, Block 6, Greenwich Townsite. Plains Oil Co. is erecting the rig for No. 1 Greenwich Townsite, Lot 4, Block 7. Shell Petroleum Corp. has the rig on the ground for No. 1 Hammant, NW cor. NE NE, Section 22-26-2. Kyle and others' No. 1 Penny, SW cor. NW SE, Section 29-28-1w, is a rig going up. Lario Oil & Gas Co. has the rig on the ground for No. 1 Teachant, NE cor. NW SE, Section 27-29-1w.

Dickey and others' No. 1 Robbins, NW cor. SW, Section 21-28-1, made 700 bbls. in sand at 3,090-3,100 feet. The Prairie Oil & Gas Co. and T. B. Slick's No. 1 Rosenhagen, SW cor. SE NE, Section 33-27-4w, is drilling at 2,995 feet. Davis, Skelly Oil Co. and others' No. 4 Wilson, SE cor. NE NE, Section 1-26-1w, made 80 bbls. from sand at 3,400-06 feet. Tilly and others' No. 1 Fitzgerald, NW cor. NE, Section 5-26-1w, has been abandoned at 450 feet. Bu-Vi-Bar Petroleum Corp. and others' No. 4 Wright, SE cor. NE, Section 12-26-1w, was completed for 1,800 bbls. in sand at 3,353-75 feet.

Connell & Slick and others' No. 1 Wyatt, NE cor. SE SE, Section 3-25-1w, is dry and abandoned at 2,786 feet. Durham Oil Co.'s No. 1 Hodge, NE cor. NW SE, Section 36-25-1w, is a dry hole at 3,425 feet. Hartman & Skaer and others' No. 1 Bolan, SE cor. SW NE, Section 36-25-1w, is dry and abandoned at 3,468 feet. Hockett & Vanderman's No. 1 Kessler, SW cor. NE, Section 36-25-1w, is a dry hole at 1,965 feet. Shaft, Held & Youker's No. 1 Koble, NE cor. NW NW SE, Section 36-25-1w, is dry and abandoned at 3,475 feet. Shawver & Dickey's No. 1 School Lot, SE cor. NE SE, Section 36-25-1w, has been abandoned after spudding.

H. H. Patton and others' No. 1 Valley Center, SW cor. NW SW NW, Section 31-25-1, has been abandoned at 2,500 feet. Betty Brown Oil Co.'s No. 1 Davis, NW cor. NE NW, Section 5-26-1, is dry and abandoned at 3,502 feet. Bu-Vi-Bar Petroleum Corp. and others' No. 2 Emerich, SW cor. SE SW, Section 6-26-1, Valley Center Pool, made 890 bbls. in sand at 3,368-74 feet. No. 4 T. Goodrich, SE cor. NE SW, Section 6-26-1, was completed for 56 bbls. in sand at 3,362-80 feet. Derby Oil Co.'s No. 1 Bowlin, NW cor. NE SW, Section 6-26-1, flowed 720 bbls. from sand at 3,387-89 feet.

Fleeger & Houston's No. 1 Benningfield, NE cor. SE NW SW, Section 6-26-1, produced 940 bbls. from sand at 3,374-78 feet. Bu-Vi-Bar Petroleum Corp. and others' No. 4 Shawver, SW cor. NW, Section 7-26-1, made 1,380 bbls. in sand at 3,349-58 feet. No. 5 Shawver, NE cor. NW NE NW, Section 7-26-1, was completed for 1,265 bbls. in sand at 3,363-70 feet. Shawnee Oil Co. and others' No. 1 Broers, NE cor. SW, Section 5-26-2, is dry and abandoned at 3,570 feet.

Sumner County

Gypsy Oil Co. has the rig up for No. 2 Douglas, C SW NE, Section 23-34-2w. Blankenship and others' No. 1 Bender, SE cor. Section 2-31-1, is dry and abandoned at 3,890 feet. Shell Petroleum Corp.'s No. 7 Taton, CSL SE NW, Section 36-31-2, made 70 bbls. in sand at 1,937-88 feet. Marland Oil Co.'s No. 1 Warner, NW cor. SW SE, Section 23-34-2, has been deepened to Wilcox sand at 3,790-3,842 feet and abandoned at 3,861 feet. Davis & Harreld Petroleum Co.'s No. 1 Schwartz, SE cor. NE NE, Section 27-34-2, made 150 bbls. from sand at 3,455-3,505 feet.

STATE OF NEBRASKA

Franklin County

Frost Oil Co.'s No. 1 Kolb, SW cor. Section 22-2n-13w, is dry and abandoned at 1,110 feet. Nebraska Oil Co.'s No. 1 Hunter, C SE, Section 3-1n-13w, has been abandoned at 1,626 feet in red rock. Ohio Oil Co.'s No. 1 Avery, SE cor. NE SE, Section 30-1n-13w, is dry and abandoned at 4,255 feet.

Webster County

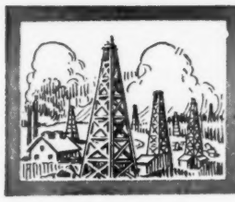
Red Cloud Oil Co.'s No. 1 Whitaker, NW cor. SE NE, Section 35-2n-11w, is a dry hole at 3,019 feet.

OIL LEASES IN CANADA

CHATHAM, Ontario, May 11.—A report of the Canadian Department of the Interior for the year 1928 states that there are in force 6,908 petroleum and natural gas leases affecting Dominion lands and embracing a total of 725,635.33 acres. The figures show the leases to be distributed as follows: Manitoba, 128 leases comprising 28,147 acres; Saskatchewan, 305 leases comprising 71,296 acres; Alberta, 6,139 leases comprising 584,822 acres; British Columbia, 331 leases comprising 37, 317 acres; and North West Territories, 5 leases comprising 4,053.33 acres.

NEW CALIFORNIA COMPANY

American Bitumuls Co., Delaware corporation, with headquarters in San Francisco, has been organized to manufacture and sell emulsified road oils and asphalt. Company is authorized by corporation commission to sell 43,750 of its no-par value common shares to Standard Oil Co. of California, at $10 per share. Total capitalization of American Bitumuls Co. consists of 75,000 no-par common. M. Beranger is president.



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

	May 14		May 7		Apr. 30	
OKLAHOMA (Group 3)—						
50-52 450 endpoint	.07¼	.07⅜	.07¼	.07⅜	.07¼	.07⅜
56-58 450 endpoint	.07¼	.07⅜	.07¼	.07⅜	.07¼	.07⅜
58-60 450 endpoint	.07¼	.07⅜	.07¼	.07⅜	.07¼	.07⅜
*58-60 437 endpoint (U. S. Motor)	.0776		.0763		.0756	
†60-62 437 endpoint	.07¾	.08	.0785		.078	
*60-62 400 endpoint	.0800		.0812		.0812	
*64-66 375 endpoint	.0865		.0862		.085	
68-70 360 endpoint	.08¼	.08¾	.08¼	.08½	.08¼	.08½
64-66 437 endpoint (blend)	.07½	.07⅝	.07½	.07⅝	.07½	.07⅝

*Weighted average prices May 13, 6 and April 29 as reported by representative refiners. Sales to jobbers only. †No sales reported on May 13.

NORTH TEXAS—						
56-58 450 endpoint	.07¼	.07¼	.07¼		.07⅛	.07¼
58-60 450 endpoint	.07⅛	.07¼	.07¼		.07⅛	.07¼
58-60 437 endpoint (U. S. Motor)	.07¼	.07⅜	.07⅜	.07⅝	.07⅜	.07½
60-62 400 endpoint	.07½	.07⅝	.07⅝		.07½	.07⅝
64-66 390 endpoint	.07⅝	.07⅞	.07¾	.07⅞	.07¾	
64-66 375 endpoint	.08	.08¼	.08	.08⅛	.07⅞	.08
68-70 360 endpoint	.08¼	.08¼	.08⅛	.08¼	.08⅛	.08¼
64-66 437 endpoint (blend)	.07¼		.07¼		.07¼	
NORTH LOUISIANA—						
58-60 437 endpoint (U. S. Motor)	.08		.07¾	.08	.07¾	.08
ARKANSAS—						
58-60 437 endpoint (U. S. Motor)	.08		.07¾	.08	.07¾	.08
PENNSYLVANIA—						
52-54 Naphtha	.08¾	.09	.08¾	.09	.08¼	.08½
54-56 Naphtha	.08¾	.09	.08¾	.09	.08½	.08¾
58-60 Gasoline	.09½	.09¾	.09½	.09¾	.09¼	.09½
60 Gasoline	.09¼	.09¾	.09½	.09¾	.09½	.09¾
62 Gasoline	.09¾	.10	.09¾	.10	.09¾	.10
64 Gasoline	.10½	.10¾	.10½	.10¾	.10¼	.10½
68-70 350 endpoint gasoline	.11¼	.11½	.11¼	.11½	.11¼	.11½
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.09	.10	.09	.10	.09	.10
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.07¼	.07⅜	.07¼	.07⅜	.07¼	.07⅜
56-58 450 endpoint	.07¼	.07⅜	.07⅜	.07½	.07¼	.07½
58-60 437 endpoint (U. S. Motor)	.07⅝	.07¾	.07⅝	.07¾	.07⅝	
60-62 400 endpoint	.07⅞	.08	.07⅞	.08⅛	.07¾	.08
64-66 375 endpoint	.08¼	.08½	.08¼	.08½	.08⅛	.08⅜
68-70 360 endpoint	.08½		.08¼	.08½	.08⅛	
64-66 437 endpoint (blend)	.07⅝	.07¾	.07½	.07⅝	.07½	.07⅝
GULF COAST (Export)—						
58-60 (U. S. Motor)	.08½		.08¼		.08¼	
60-62 400 endpoint	.09½		.09½		.09½	
61-63 390 endpoint	.09¾		.09¾		.09¾	
64-66 375 endpoint	.10		.10		.10	

NATURAL GASOLINE

	May 14		May 7		Apr. 30	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.07¼		.07⅝	.07¾	.07¾	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.07¼		.07⅝	.07¾	.07¾	
Grade B, 76-83.9, 375 e.p., rec. 85%	.06¾		.07¼		.07½	
Grade BB, 84-92, 375 e.p., rec. 85%	.06¾		.07¼		.07½	
Grade C, 80-90, 375 e.p., rec. 78%	.06¾		.07	.07⅛	.07¼	.07⅜
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.07¼		.07⅝	.07¾	.07¾	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.07¼		.07⅝	.07¾	.07¾	
Grade B, 76-83.9, 375 e.p., rec. 85%	.06¾		.07¼		.07½	
Grade BB, 84-92, 375 e.p., rec. 85%	.06¾		.07¼		.07½	
Grade C, 80-90, 375 e.p., rec. 78%	.06¾		.07	.07⅛	.07¼	.07⅜
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.08		.08		.08¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.07¾		.07⅝		.08	
Grade C, 80-90, 375 e.p., rec. 78%	.07½		.07½		.07¾	
CALIFORNIA—						
75-78, 375-390 endpoint	.08	.09	.08	.09	.08	.09
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.07¼		.07⅝	.07¾	.07¾	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.07¼		.07⅝	.07¾	.07¾	
Grade B, 76-83.9, 375 e.p., rec. 85%	.06¾		.07¼		.07½	
Grade BB, 84-92, 375 e.p., rec. 85%	.06¾		.07¼		.07½	
Grade C, 80-90, 375 e.p., rec. 78%	.06¾		.07⅛		.07⅜	

BURNING OIL

	May 14		May 7		Apr. 30	
OKLAHOMA (Group 3)—						
41-43 water white kerosene	.05¾	.05⅞	.06	.06⅛	.06¼	.06⅜
42-44 water white kerosene	.05⅞	.06⅛	.06¼	.06½	.06½	.06⅝
NORTH LOUISIANA—						
41-43 water white kerosene	.06¾	.07	.06¾		.06¾	.07
NORTH TEXAS—						
41-43 water white kerosene	.05	.05¼	.05½		.06	.06⅛
40-42 water white kerosene	.05		.05⅛	.05¼	.05⅜	
ARKANSAS—						
41-43 water white kerosene	.06¾	.07	.06¾		.06¾	.07
PENNSYLVANIA—						
43 Kerosene prime white	.07	.07¼	.07	.07¼	.07	.07¼
45 Kerosene water white	.07	.07¼	.07¼	.07½	.07¼	.07½
46 Kerosene water white	.07¾	.08	.07¾	.08	.07¾	.08
47 Kerosene water white	.08	.08¼	.08	.08¼	.08¼	.08½
300 Mineral Seal	.07¾	.08	.07¾	.08	.07¾	.08
CALIFORNIA—						
38-40 water white Kero. (high-burning test)	.06½	.07	.06½	.07	.06½	.07
Engine distillate, 43-44, 445 endpoint	.07½	.08½	.07½	.08½	.07½	.08½
Engine distillate, 42-44, 480 endpoint	.07	.08	.07	.08	.07	.08
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.05⅞	.06	.05¾	.06	.06⅛	.06¼
42-44 water white kerosene	.06⅛	.06¼	.06¼	.06¼	.06½	.06⅝
GULF COAST (Export)—						
41-43 prime white	.07¾		.07¾		.07¾	
41-43 prime white	.08¾		.08¾		.08¾	

FUEL OIL

	May 14		May 7		Apr. 30	
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil, per bbl.	.47½	.52½	.47½	.52½	.50	.52½
18-22 Fuel Oil, per bbl.	.52½	.57½	.52½	.57½	.55	.60
22-26 Fuel Oil, per bbl.	.55	.60	.55	.60	.57½	.62½
24-26 Fuel Oil, per bbl.	.60	.65	.62½	.67½	.62½	.67½
26-30 Fuel Oil, per bbl.	.80	.85	.82½	.87½	.82½	.87½
28-30 Fuel Oil, per bbl. (industrial)	.82½	.85	.85	.90	.85	.90
32-36 Gas Oil (industrial)	.02¼	.02⅜	.02⅜	.02½	.02½	.02⅝
32-36 Gas Oil (straw color)	.02½	.02⅝	.02⅝	.02¾	.02⅝	.02¾
36-38 Distillate	.03	.03⅛	.03¼	.03¼	.03⅛	.03¼
38-40 Straw Distillate	.03¼	.03½	.03⅜	.03½	.03½	.03⅝
NORTH TEXAS—						
Below 20 Fuel Oil	.55	.60	.60	.65	.60	.65
24-26 Fuel Oil, per bbl.	.60	.65	.65	.70	.65	.70
32-36 Gas Oil (straw)	.02¼	.02⅜	.02⅜	.02½	.02⅜	.02½
38-40 Straw Distillate	.03⅛	.03¼	.03¼	.03½	.03¼	.03½
NORTH LOUISIANA—						
18-20 Fuel Oil, per bbl.	.75		.70	.75	.70	.75
30-32 Gas Oil	.02⅝	.02¾	.02⅝	.02¾	.02¾	
ARKANSAS—						
33-36 Distillate	.03	.03¼	.03	.03¼	.03	.03¼
30-32 Gas Oil	.02½	.02⅝	.02½	.02⅝	.02⅝	.02¾
16-22 Refinery Fuel Oil, per bbl.	.75		.70	.75	.70	.75
GULF COAST (South Texas)—						
Gas Oil	.03½	.03¾	.03½	.03¾	.03½	.03¾
Bunker C Fuel (cargo lots), per bbl.	.75	.85	.75	.85	.75	.85
Bunker C Fuel (small lots)	.95	1.00	.95	1.00	.95	1.00
PENNSYLVANIA—						
30-34 Fuel Oil	.04¾	.05	.04¾	.05	.04¾	.05
36-40 Fuel Oil	.05¼	.05½	.05¼	.05½	.05¼	.05½
CALIFORNIA—						
33-36 Distillate	.04¼	.04¾	.04¼	.04¾	.04¼	.04¾
26-32 Distillate	.03½	.04	.03½	.04	.03½	.04
15-20 Fuel Oil, Bunker (at tide water)	.65	.85	.65	.85	.65	.85
15-20 Fuel Oil (cargo lots), per bbl.	.70	.85	.70	.85	.70	.85
27 plus Diesel, per bbl.	.90	1.05	.90	1.05	.90	1.05
CHICAGO DISTRICT (Based on Group 3)—						
22-26 Fuel Oil, per bbl.	.60	.65	.60	.65	.60	.65
18-22 Fuel Oil, per bbl.	.50	.55	.55	.60	.52½	.57½
28-30 Fuel Oil	.90	.95	.90	1.00	.95	1.05
32-36 Gas Oil	.02½	.02⅝	.02¼	.02⅝	.02½	.02¾
32-36 Gas Oil (industrial)	.02⅜	.02½	.02⅜	.02½	.02½	.02⅝
36-38 Distillate	.03	.03⅛	.03¼	.03¼	.03½	
38-40 Straw Distillate	.03¼		.03¼	.03⅜	.03⅝	.03¾

LUBRICATING OIL AND WAX

	May 14		May 7		Apr. 30	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06¾	.07	.06	.06½	.06	.06½
100 vis., 3 color, 20-25 cold test	.05¾	.06	.05¼	.05½	.05¼	.05½
150 vis., 3 color, 20-25 cold test	.07¾	.08	.07¼	.07½	.07¼	.07½
150 vis., 4 color, 20-25 cold test	.07¼	.07½	.07	.07¼	.07	.07¼
180 vis., 3 color, 23-28 cold test	.09¼	.09½	.08¾	.09	.08¾	.09
180 vis., 4 color, 23-28 cold test	.08¾	.09	.08¼	.08¾	.08¼	.08¾
180 vis., 5 color, 23-28 cold test	.08½	.08¾	.08¼	.08½	.08¼	.08¾
200 vis., 3 color, 23-28 cold test	.09¾	.10	.09¼	.09½	.09¼	.09½
200 vis., 4 color, 23-28 cold test	.09¼	.09½	.09	.09¼	.09	.09¼
200 vis., 5 color, 23-28 cold test	.08¾	.09	.08½	.08¾	.08½	.08¾
240 vis., 3 color, 25-30 cold test	.13¼	.13½	.12¼	.12½	.12¼	.12½
240 vis., 4 color, 25-30 cold test	.12¼	.12½	.11¾	.12	.11¾	.12
240 vis., 5 color, 25-30 cold test	.11¾	.12	.10¾	.11	.10¾	.11
280 vis., 3 color, 25-30 cold test	.15¾	.16	.13¾	.14	.13¾	.14
280 vis., 4 color, 25-30 cold test	.14¾	.15	.12¾	.13	.12¾	.13
280 vis., 5 color, 25-30 cold test	.13¾	.14	.11¾	.12	.11¾	.12
Cylinder Stocks:						
600, steam refined, light green	.13	.15	.11	.13	.11	.13
600, steam refined, dark green	.12		.10	.11	.08	.10
190-200 vis., D color Bright Stock	.39		.36	.37	.34	.37
150-160 vis., D color Bright Stock	.34		.34		.32	.34
150-160 vis., E color Bright Stock	.32		.32		.30	.32
Waxes:						
124-126 White Crude Scale Wax	.03	.03¼	.03¼	.03⅜	.03¼	.03⅜
PENNSYLVANIA—						
34 Neutral	.07¾	.08	.07¾	.08	.07¾	.08
34 Sundebloom	.07¾	.08	.07¾	.08	.07¾	.08
36 Miners' Neutral	.07¾	.08	.07¾	.08	.07¾	.08
150, 3 color	.21½	.22	.21½	.22	.21½	.22
180, 3 color	.27	.27½	.27	.27½	.27	.27½
200, 3 color	.29½	.30	.29½	.30	.29½	.30
220, 3 color	.31	.31½	.31	.31½	.31	.31½
600, steam refined	.37	.38	.34½	.35	.32½	.33
635, steam refined	.39	.40	.36	.37	.34½	.35
650, steam refined	.41	.42	.39	.40	.37½	.38
600, Pennsylvania Flash	.41½	.42	.41½	.42	.39	.40
630, Pennsylvania Flash	.44		.43		.43	
600, E filtered	.37½	.38	.37½	.38	.31½	.32
600, D filtered	.43½	.44	.43½	.44	.35½	.36
Pennsylvania Bright Stock	.57		.57		.53	
*122-124 White Crude Scale Wax	.03¾		.03¾		.03¾	
*124-126 White Crude Scale Wax	.04		.04		.04	

*At New York.

GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.06½	.07	.06½	.07	.06½	.07
No. 3 color, 200 vis., pale oil	.09	.10	.09	.10	.09	.10
No. 3 color, 300 vis., pale oil	.10	.10½	.10	.10½	.10	.10½
No. 3½ color, 500 vis., pale oil	.11	.11½	.11	.11½	.11	.11½
No. 4 color, 750 vis., pale oil	.14	.14½	.14	.14½	.14	.14½
No. 5 to 6 color, 200 vis., red oil	.07½	.08	.07½	.08	.07½	.08
No. 5 to 6 color, 300 vis., red oil	.08½	.09	.08¼	.09	.08½	.09
No. 5 to 6 color, 500 vis., red oil	.09½	.10½	.09½	.10½	.09½	.10½
No. 5 to 6 color, 750 vis., red oil	.12½	.13	.12½	.13	.12½	.13
No. 2½ color, 200 vis., pale filtered	.11	.12	.11	.12	.11	.12
No. 2½ color, 300 vis., pale filtered	.12	.13	.12	.13	.12	.13
No. 2½ color, 500 vis., pale filtered	.14½	.15	.14½	.15	.14½	.15
No. 2½-3 color, 750 vis., pale filtered	.17	.19	.17	.19	.17	.19
CALIFORNIA—						
130 vis., 2½-3 color	.10¼	.10½	.10¼	.10½	.10¼	.10½
200 vis., 2½-3 color	.11½	.11¾	.11½	.11¾	.11½	.11¾
300 vis., 3-3½ color	.13	.13¼	.13	.13¼	.13	.13¼

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

350 vis., 3½-4 color	.13½	.13¾	.13½	.13¾	.13½	.13¾
400 vis., 3½-4 color	.15	.15½	.15	.15½	.15	.15½
Red Neutral:						
200 vis., 4½-5 color	.11	.11¼	.11	.11¼	.11	.11¼
300 vis., 5-6 color	.12	.12¼	.12	.12¼	.12	.12¼
400 vis., 5-6 color	.13¼	.14	.13¼	.14	.13¼	.14
500 vis., 4½-5 color	.15¼	.15½	.15¼	.15½	.15¼	.15½
500 vis., 5-6½ color	.15	.15¼	.15	.15¼	.15	.15¼
600 vis., 6½ plus color	.16	.16¼	.16	.16¼	.16	.16¼

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	May 14		May 7		Apr. 30	
Gasoline, U. S. Motor, 58-60 437	.09	.09¼	.09	.09¼	.09	.09¼
Kerosene, water white, 41-43	.08		.08		.08	.08½
*Fuel Oil, Bunker "C," 14-16, per bbl.	1.05		1.05		1.05	
†Fuel Oil, Diesel, 28-30, per bbl.	2.00		2.00		2.00	
Gas Oil, 32-36 gravity	.05	.05½	.05	.05½	.05	.05½
25 pale Paraffin Oil	.10½		.10½		.10½	
28 pale Paraffin Oil	.07¼		.07¼		.07¼	
285 red Paraffin Oil	.11½		.11½		.11½	
250 red Paraffin Oil	.11		.11		.11	
225 red Paraffin Oil	.09½		.09½		.09½	
200 red Paraffin Oil	.09		.09		.09	
Refined Wax:						
120-122 a.m.p., per lb.	.04¼		.04¼		.04¼	
125-127 a.m.p., per lb.	.04¾		.04¾		.04¾	
130-132 a.m.p., per lb.	.06		.06		.06	
133-135 a.m.p., per lb.	.06½		.06½		.06½	
135-137 a.m.p., per lb.	.06¾		.06¾		.06¾	
Petrolatum in barrels, carload lots, per pound.						
Dark green	.02		.02		.02	
Amber	.03½		.03½		.03½	
Extra amber	.03¾		.03¾		.03¾	
Cream	.06½		.06½		.06½	
Lily White	.07½		.07½		.07½	
Snow white	.08½		.08½		.08½	

*Lighterage 5.0 cents a barrel extra. †Lighterage 6.5 cents a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	May 14		May 7		Apr. 30	
Kerosene, prime white	.08		.08		.08	
Kerosene, water white	.09		.09		.09	
600, steam refined cylinder stocks, in bbls.	.40	.41	.40	.41	.40	.41
635, steam refined	.42	.44	.42	.44	.42	.44
650, steam refined	.47	.48	.47	.48	.47	.48
600, Pennsylvania Flash	.50	.51	.50	.51	.50	.51
630, Pennsylvania Flash	.55	.56	.55	.56	.55	.56
600, Warren E	.43	.45	.41	.42	.41	.42
600, Oil City E	.42	.44	.40	.41	.40	.41
Light 140-150 Bright Stocks	.63	.65	.60	.61	.60	.61
Dark 140-150 Bright Stocks	.61	.63	.58	.59	.58	.59

LOS ANGELES EXPORT PRICES

	May 14		May 7		Apr. 30	
Kerosene, water white	.05½	.06	.05½	.06	.05½	.06
U. S. Motor Gasoline, 53-55, 437 e.p.	.07	.08	.07	.08	.07	.08

CRUDE OIL GRAVITY TABLE

Gravity—	1 Okla., Kans. N. C. Tex.	2 No. La. and Arkansas	3 Smackover, Ark.	4 Stephens, Ark.	5 Wheeler (Texas Panhandle)	6 Gray County (Texas Panhandle)	7 Carson and Hutchinson	8 (Texas Panhandle) Salt Creek, Wyo.	9 Grade B & Light Crude (G. Coast)	10 Somerset (South Central Texas)
24 and above	....	....	.90	....	....	....	....	....	....	....
Below 24	....	....	.75	....	....	....	....	....	....	....
Below 25	.60	....	....	....	....	....	....	....	1.05	....
25 to 25.9	.66	....	....	....	....	....	....	....	1.07	....
Below 26	....	....	....	....	....	....	....	....	....	....
26 to 26.9	.72	....	....	....	....	....	....	....	1.09	....
27 to 27.9	.78	....	....	....	....	....	....	....	1.11	....
Below 28	....	.78	....	.70	.70	.69	.72	....	....	....
28 to 28.9	.84	.84	....	.74	.70	.69	.72	....	1.13	....
29 to 29.9	.90	.90	....	.78	.70	.75	.72	.90	1.15	....
30 to 30.9	.96	.96	....	.82	.76	.81	.72	.96	1.17	....
31 to 31.9	1.02	1.02	....	.86	.82	.87	.72	1.02	1.19	....
32 to 32.9	1.08	1.08	....	.90	.88	.93	.78	1.08	1.21	1.05
33 to 33.9	1.11	1.13	....	....	.91	.96	.81	1.11	1.23	1.07
34 to 34.9	1.14	1.14	....	....	.94	.99	.84	1.14	1.25	1.09
35 to 35.9	1.17	1.17	....	....	.97	1.02	.87	1.17	1.27	1.11
36 to 36.9	1.20	1.20	....	....	1.00	1.05	.90	1.20	....	1.13
37 to 37.9	1.23	1.23	....	....	1.03	1.08	.93	1.23	....	1.15
38 to 38.9	1.26	1.26	....	....	1.06	1.11	.96	....	....	1.17
39 to 39.9	1.29	1.29	....	....	1.09	1.14	.99	....	....	....
40 to 40.9	1.32	1.32	....	....	1.12	1.17	1.02	....	....	....
41 to 41.9	1.35	1.35	....	....	1.15	1.20	1.05	....	....	....
42 to 42.9	1.38	1.38	....	....	1.18	1.23	1.08	....	....	....
43 to 43.9	1.41	1.41	....	....	1.21	1.26	1.11	....	....	....
44 and above	1.44	1.44	....	....	1.24	1.29	1.14	....	....	....

Column 1, Note—Magnolia Petroleum Co. posted schedule January 24, 1929, making price below 26 gravity 60 cents per barrel, 26-26.9 gravity 65 cents, 27-27.9 gravity 70 cents, 28-28.9 gravity 75 cents, 29-29.9 gravity 80 cents, 30-30.9 gravity 90 cents and 31-31.9 gravity $1, with balance of the price schedule as shown.

Oklahoma—Humble Oil & Refining and Carter Oil Co. January 24, Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co., The Texas Company, January 25. Champlin Refining Co. on April 15 established prices for Garber, Tonkawa, Lovell, Billings, Watchorn and Thomas Fields which are 20 cents per barrel higher than posted schedules of other buyers; 15 cents of this 20-cent advance was made effective April 1.

North Central Texas—Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs (Southwest Texas, Iatan and Panola, Iatan posted a flat price of 93 cents by Magnolia on January 14, 1928), Currie, Nocona and Moran. Prairie, Sinclair and Gulf, The Texas Company, January 25, Humble Oil & Refining Co., January 24.

Kansas—Prairie, Sinclair and The Texas Company, January 25; Carter, January 24.

Column 2—Arkansas and North Louisiana—[Caddo, Bull Bayou, Crichton, De Soto, Haynesville, Homer and El Dorado only], Standard Oil Co. of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co., Magnolia Petroleum Co., schedule effective January 26 applies to Pine Island, Haynesville, Bull Bayou, Louisiana and El Dorado, Ark., light crude. The Texas Company January 24 posted prices below 28 gravity at 6 cents differential per degree with minimum of 60 cents for all below 24 gravity.

Column 3—February 6, Louisiana Oil Refining Corp.; February 7, Standard Oil Co. of Louisiana, The Texas Company, Gulf Refining Co., Magnolia Petroleum Co., and on February 10, Atlantic Oil Producing Co.

Column 4—Atlantic Oil Producing Co., Louisiana Oil Refining Corp., January 28.

Columns 5, 6 and 7—Humble Oil & Refining Co., Magnolia Petroleum Co., January 24, 1929.

Column 8—Midwest Refining Co., January 25, 1929. All crude over 27 gravity $1.23 per barrel.

Column 9—Humble Oil & Refining Co. and other major buyers January 26 (schedule ends 35 and above), with exception of Magnolia Petroleum Co., which stops at 31 degrees gravity. Sun Pipe Line Co. and The Texas Company posted 2 cents differential for each degree above 35 gravity and 1.37 for 40 gravity and above.

Column 10—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

CALIFORNIA CRUDE OIL PRICES

Standard Oil Co.-Union Oil Co. (Effective January 18, 1929)

Gravity—	1 Salt Lake, Petrero, Newport, Long Beach, Sunnyland, La Merida, Los Angeles, Fullerton, Richfield, Olinda-Brea, Alamitos Heights, Signal Hill, Seal Beach, Huntington Beach, Athens, Inglewood, Rosecrans-Dominguez, Watsonville	2 Whittier, La Habra, Coyote Hills	Midway-Sunset, Elk Hills, Lost Hills, Belridge, Buena Vista Hills	4 Montebello	5 Santa Fe Springs	Santa Marie, Coalinga	7 Wheeler Ridge, Fruitvale	Orcutt	8 Ventura, Rincon	9 Ventura Ave.	Elwood Terrace
14 to 14.9	.70	.70	.50	.70	....	.50	.50	.65	.70	1.02	....
15 to 15.9	.70	.70	.50	.70	....	.50	.50	.65	.70	....	....
16 to 16.9	.70	.70	.50	.70	....	.50	.50	.65	.70	....	....
17 to 17.9	.70	.70	.50	.70	....	.50	.50	.65	.70	....	....
18 to 18.9	.75	.75	.56	.70	....	.56	.56	.70	.75	....	....
19 to 19.9	.80	.80	.62	.75	....	.62	.62	.70	.80	....	....
20 to 20.9	.85	.84	.68	.80	....	.68	.68	.70	.85	....	....
21 to 21.9	.89	.88	.74	.85	.89	.74	.74	.86	.86	....	....
22 to 22.9	.93	.91	.80	.90	.92	.80	.80	.87	.87	....	....
23 to 23.9	.97	.94	.85	.95	.95	.85	.85	.90	.90	....	....
24 to 24.9	1.01	.97	.90	.98	.98	.88	.88	.94	.94	....	....
25 to 25.9	1.05	1.00	.95	1.01	1.01	.91	.91	.98	.98	....	....
26 to 26.9	1.09	1.04	1.00	1.04	1.04	.94	.94	1.02	1.02	....	....
27 to 27.9	1.13	1.08	1.05	1.07	1.07	.98	.97	....	1.06	....	....
28 to 28.9	1.17	1.12	1.10	1.10	1.10	1.02	....	....	1.10	....	....
29 to 29.5	1.21	1.16	1.16	1.13	1.15	1.06	....	....	1.14	....	....
30 to 30.9	1.25	1.20	1.22	1.16	1.20	1.10	....	....	1.18	....	....
31 to 31.9	1.30	....	1.28	....	1.25	1.14	....	....	1.23	....	....
32 to 32.9	1.35	....	1.34	....	1.30	1.18	....	....	1.28	....	....
33 to 33.9	1.41	....	1.40	....	1.35	1.22	....	....	1.34	....	....
34 to 34.9	1.47	....	1.46	....	1.40	1.26	....	....	1.40	1.16	....
35 to 35.9	1.53	....	....	....	1.45	1.30	....	....	1.46	1.22	....
36 to 36.9	1.59	....	....	....	1.50	....	....	....	1.52	1.28	....
37 to 37.9	1.65	....	....	....	1.55	....	....	....	1.58	1.34	....
38 to 38.9	1.71	....	....	....	1.60	....	....	....	1.64	1.40	....
39 to 39.9	1.77	....	....	....	1.65	....	....	....	1.70	1.46	....
40 to 40.9	1.83	....	....	....	....	....	....	....	1.76	1.52	....
41 to 41.9	1.89	....	....	....	....	....	....	....	1.82	1.58	....
42 to 42.9	1.95	....	....	....	....	....	....	....	1.88	1.64	....

Kern River, Newhall-McKittrick, Mount Poso and Round Mountain 11 to 13.9 gravity 45 cents, 14 gravity and above 50 cents, effective October 2, 1929. On December 1, 1928, the Union Oil Co. posted Midway-Sunset, Elk Hills, Buena Vista, Lost Hills and Coalinga crude as follows: 11 to 13.9 gravity at 45 cents, 14 gravity and above 50 cents.

Column 1—Signal Hill, Seal Beach, Huntington Beach and Alamitos Heights crude, 14 to 32.9 gravity, inclusive; Richfield, Olinda-Brea and Fullerton, 14 to 30.9 gravity; Torrance and Inglewood, 14 to 28.9 gravity, Dominguez and Athens-Rosecrans, 24 to 42.9 gravity.

Column 2—Whittier crude, 14 to 22.9 gravity; Coyote Hills, 14 to 30.9 gravity.

Column 3—Kern River, Newhall and McKittrick, 11 to 19.9 gravity; Midway-Sunset, Buena Vista and Elk Hills, 11 to 33.9 gravity; Lost Hills, 11 to 34.9 gravity; oil below 14 gravity posted at 45 cents.

Column 6—Oil below 14 gravity posted at 45 cents.

Columns 8 and 9 posted by Union Oil Co. only.

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

Corsicana heavy (January 11)*	.80
Other fields	See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties—See gravity table.

WEST TEXAS

Iatan*	Same as North Texas
Crane-Upton-Crockett, Pecos, Winkler, and Glasscock (July 26)‡	$ .65
Chalk†	.65
Mitchell†	.65

*Includes Howard County and Westbrook Fields.
†Magnolia Petroleum Co., January 26, 1929.
‡Posted by Humble Oil & Refining Co. Magnolia Petroleum Co., and Gulf Pipe Line Co.

ARKANSAS-NORTH LOUISIANA

Cotton Valley (Below 36 gravity April 11)	$ .75
Bellevue	1.20
Urania (April 22)	1.00
East El Dorado (March 16, 1927)	1.00
Other fields	See gravity table

Cotton Valley crude above 36 gravity takes same gravity price schedule as shown for North Louisiana and Arkansas crude in Mid-Continent gravity price table.

Note—Cotton Valley and Bellevue posted by Standard Oil Co. of Louisiana, Louisiana Oil Refining Co., Gulf Refining Co., and Magnolia Petroleum Co.; Urania posted by Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co., Gulf Refining Co.

GULF COAST

Grade A (March 14)*	$1.20
Grade B	See gravity table
Jennings, La. (March 14)†	$1.05
Saratoga, Batson, Dayton (March 14, 1927)‡	1.20
Markham (March 14)§	1.00
High Island (December 14)¶	1.00

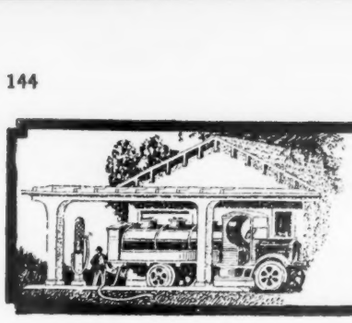
*Humble Oil & Refining Co., The Texas Company, Gulf Pipe Line Co., and Sun Pipe Line Co. †Gulf Pipe Line Co. ‡Sun Pipe Line Co. §The Texas Company.
¶Posted by Gulf Pipe Line Co.

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.
(Effective January 25, 1929)

Rock Creek, Wyo.	$1.18
Salt Creek	See gravity table
Big Muddy	$1.28
Grass Creek, heavy (July 27, 1928)	.90
Grass Creek, light	1.36
Mule Creek (May 1, 1928)	1.10
Elk Basin	1.36
Lance Creek	1.38
Poison Spider (March 14, 1927)	1.00
Notches (March 14, 1927)	.65
Rex Lake (February 22)	1.10
Osage	1.38
Lost Soldier (contract)	1.00
Hamilton Dome (March 14, 1927)	.85
Greybull	1.57
Cat Creek (Montana) (July 27, 1928)	1.48
Sunburst (Montana) (May 18, 1928)	1.65
Torchlight	1.38

(Continued on Page 144)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns May 14.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago dist.†	14.0	15.0	...	13.0
Decatur, Ill.	14.2	15.2	...	13.1
E. St. Louis	13.4	14.4	...	12.2
Joliet	14.4	15.4	...	13.3
Peoria	14.2	14.0	...	13.1
Quincy	14.2	15.2	...	12.9
Davenport, Ia.	17.5	18.5	3.0	13.3
Des Moines	17.5	18.5	3.0	13.3
Keokuk	17.5	18.5	3.0	13.3
Sioux City	17.1	18.1	3.0	12.9
Duluth, Minn.	18.5	19.5	3.0	13.9
Mankato	18.1	19.1	3.0	13.7
Minneapolis	18.2	19.2	3.0	13.9
La Crosse, Wis.	17.2	18.2	2.0	14.0
Milwaukee	16.1	17.1	2.0	12.9
Madison	16.3	17.3	2.0	13.1
Detroit, Mich.	17.8	18.8	3.0	14.7
Grand Rapids	17.7	18.7	3.0	14.6
Saginaw	17.9	18.9	3.0	14.8
Evansville, Ind.	18.0	19.0	4.0	14.0
Fort Wayne	18.4	19.4	4.0	14.4
Indianapolis	18.2	19.2	4.0	14.2
South Bend	18.4	19.4	4.0	14.4
Fargo, N. D.	18.9	19.9	2.0	15.9
Huron, S. D.	19.3	20.3	4.0	14.7
Sioux Falls	18.1	19.1	4.0	14.4
K. C., Mo.*	16.9	17.9	3.0	11.6
Springfield*	16.8	17.8	3.0	12.5
St. Louis*	15.9	16.9	2.5	12.3
St. Joseph	16.5	17.5	3.0	12.2
Wichita, Kans.	15.8	16.8	3.0	11.8
Bartlesville, Okla.	15.5	16.5	3.0	11.5

*State tax 2 cents; remainder city tax.
†Effective February 20, discounts on Q.D.A. in Chicago district 2 cents off service station price on purchases of 500 gallons or more per month and 4 cents on purchases of 1,000 gallons or more per month.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	14.7	11.9
V. M. & P. naphtha	16.2	12.9
Cleaner's naphtha	16.0	13.9
Stanisol	17.0	14.4

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting. Cleaner's naph tha price of 16 cents and Stanisol 17 cents effective March 24.

STANOLIND FURNACE OIL IN CHICAGO

Less than 100 gallons	9.0
100 to 799 gallons	8.0
800 gallons or more	7.5

Note—Outside Chicago furnace oil discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

The following quantity discounts from the service station price are allowed on monthly sales of gasoline: 2,000 gallons or less, 2 cents; more than 2,000 and less than 6,000 gallons, 2½ cents; more than 6,000 gallons, 3 cents. Discounts are allowed each month, and they are not cumulative. Delivery tickets showing date and quantity delivered must be sent to the seller before the tenth of the month to secure the discount on the previous month's purchases.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlantic City	16.0	20.0	2.0	13.0
Newark, N. J.	16.0	20.0	2.0	13.0
Annapolis, Md.	18.0	22.0	4.0	13.0
Baltimore	18.0	22.0	4.0	12.0
Cumberland	18.0	22.0	4.0	13.0
Washington	16.0	20.0	2.0	12.0
Danville, Va.	19.0	23.0	5.6	13.0
Norfolk	19.0	23.0	5.0	13.0
Petersburg	19.0	23.0	5.6	13.0
Roanoke	19.0	23.0	5.0	13.0
Richmond	19.0	23.0	5.0	13.0
Charles'n, W.Va.	18.0	22.0	4.0	13.0
Keyser	18.0	22.0	4.0	13.0
Parkersburg	18.0	22.0	4.0	13.0
Wheeling	18.0	22.0	4.0	13.0
Charlotte, N. C.	19.0	23.0	5.0	13.0
Hickory	19.0	23.0	5.0	13.0
Mt. Airy	19.0	23.0	5.0	13.0
Salisbury	18.0	20.0	5.0	13.0
Charls'ton, S.C.	20.0	24.0	6.0	13.0
Columbia	20.0	24.0	6.0	13.0

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points*	19.0	20.0	4.0	†14.0

*Dealers and commercial accounts 2 cents under tank wagon.
†Service station price 16 cents.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

The Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	16.0	*21.0	...	14.0
Philadelphia	16.0	*21.0	...	14.0
Scranton	16.0	*21.0	...	14.0
Allentown	16.0	*21.0	...	14.0
Altoona	16.0	*21.0	...	14.0
Erie	17.0	*21.0	...	14.0
Dover, Del.	19.0	21.0	3.0	14.0
Wilmington	19.0	21.0	3.0	14.0
Springf'd, Mass.	18.0	20.0	2.0	15.0
Worcester	18.0	20.0	2.0	15.0
Boston	18.0	20.0	2.0	15.0
Providence, R.I.	15.0	16.0	2.0	15.0
Hartford, Conn.	18.0	20.0	2.0	14.0
New Haven	17.0	18.0	2.0	15.0

*Includes tax of 3.0 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the state. The Atlantic Refining Co. recognizes a 2-cent per gallon discount on gasoline from its posted tank wagon markets on sales to dealers for purposes of resale. The Atlantic Refining Co. also recognizes a maximum discount of 2 cents per gallon on gasoline to commercial accounts under contract for one year.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	15.0	16.0	2.0	15.0
New York*	19.0	21.0	2.0	15.0
Buffalo	16.0	17.0	2.0	14.0
Rochester	16.0	17.0	2.0	14.0
Syracuse	16.0	17.0	2.0	15.0
Boston, Mass.	18.0	20.0	2.0	15.0
Augusta, Me.	20.0	22.0	4.0	15.0
Manch't'r, N.H.	20.0	22.0	4.0	15.0
Burlington, Vt.	19.0	20.0	4.0	15.0

*Prices in steel barrels.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.	21.0	21.0	4.0	16.5
Augusta	21.0	23.0	4.0	15.5
Macon	19.0	21.0	4.0	16.5
Savannah	20.0	22.0	4.0	15.5
Birm'ham, Ala.	18.0	20.0	4.0	13.0
Mobile	21.0	23.0	4.0	15.0
Montgomery	20.0	22.0	4.0	16.5
Clarks'le, Miss.	19.0	21.0	5.0	12.5
Jackson	18.0	20.0	5.0	13.0
Natchez	20.5	22.5	5.0	14.0
Gulfport	22.5	24.5	5.0	14.0
Vicksburg	18.0	20.5	5.0	14.0
Jack'ville, Fla.	22.0	24.0	5.0	14.5
Miami	23.0	25.0	5.0	15.5
Pensacola	23.0	25.0	5.0	14.5
Tampa	22.0	24.0	5.0	14.5
Lexington, Ky.	20.0	22.0	5.0	15.5
Covington	20.0	21.0	5.0	15.5
Louisville	20.0	22.0	5.0	15.0
Ashland	18.0	19.0	5.0	15.5
Catlettsburg	18.0	19.0	5.0	15.5

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspectin fee of one-half cent on kerosene and one-fourth cent on gasoline. Pensacola and Mobile taxes include 1-cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to state tax.

PACIFIC COAST FERRITORY

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
San Francisco	19.0	23.0	3.0	15.5
Los Angeles	18.5	22.5	3.0	15.5
Reno, Nev.	24.0	26.0	4.0	19.0
Portland, Ore.	19.5	23.5	3.0	16.5
Seattle, Wash.	18.5	22.5	2.0	16.5
Tacoma	18.5	22.5	2.0	16.5
Spokane	22.5	26.5	2.0	20.5
Phoenix, Ariz.	18.0	22.0	4.0	20.5

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	18.25	20.25	4.0	13.25
McCook	19.75	21.75	4.0	14.75
Norfolk	18.75	20.75	4.0	13.75
N. Platte	19.75	21.75	4.0	14.5
Scottsbluff	19.75	21.75	4.0	14.25

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.*	16.5	20.5	5.0	16.0
Baton Rouge	15.0	19.5	4.0	14.5
Alexandria	16.0	20.0	4.0	16.0
Lafayette†	17.0	21.0	5.0	14.0
Lake Charles†	17.5	21.5	5.0	16.0
Shreveport	16.0	20.0	4.0	15.0
Knoxv'le, Tenn.	20.0	24.0	5.0	16.0
Memphis	16.0	20.0	5.0	12.5
Chattanooga	19.5	23.5	5.0	16.0
Nashville	17.0	21.0	5.0	16.0
Bristol	20.0	23.0	5.0	14.0
Lit. Rock, Ark.	18.0	22.0	5.0	13.0

*Tax of 5 cents includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax and 1-cent parish tax.
†Includes 1-cent parish tax.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	13.0	17.0	2.0	13.0
Fort Worth	13.0	16.0	2.0	13.0
Houston	14.0	18.0	2.0	13.0
San Antonio	13.0	17.0	2.0	12.0
El Paso	17.0	20.0	2.0	16.0
Texarkana	14.0	18.0	2.0	13.0
Muskogee, Okla.*	13.0	17.0	3.0	13.0
Okla. City*	13.0	17.0	3.0	12.0
Tulsa*	14.0	18.0	3.0	10.0
Ft. Smith, Ark.	15.0	19.0	5.0	12.0
Little Rock	17.0	21.0	5.0	13.0

*Gasoline tank wagon price to dealers 2 cents under posted tank wagon.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	19.0	22.0	4.0	15.5
Pueblo	19.0	22.0	4.0	15.5
Grand Junction	22.5	25.5	4.0	19.0
Casper, Wyo.	19.0	22.0	4.0	14.0
Cheyenne	20.0	23.0	4.0	15.5
Butte, Mont.	24.5	27.5	5.0	20.0
Helena	24.5	27.5	5.0	20.0
Salt Lake, Utah	21.0	24.0	3.5	17.0
Albu'que, N. M.	20.0	23.0	5.0	17.0
Boise, Idaho	23.5	26.5	4.0	19.0
Twin Falls	23.5	26.5	4.0	19.0

TANK WAGON CHANGES

April 15—Standard Oil Co. of Kentucky reduced the gasoline tank wagon and station prices 2 cents in Clarksdale and Vicksburg, Miss.

April 19—Standard Oil Co. of Kentucky reduced the gasoline tank wagon and station prices 2 cents in Montgomery, Ala., and Jackson, Miss.

April 24—Standard Oil Co. of Kentucky reduced the gasoline tank wagon price 1 cent and the station price 2 cents in Macon, Ga.

May 3—Continental Oil Co. reduced the gasoline tank wagon and station prices 1 cent in Albuquerque, N. Mex.

May 8—Standard Oil Co. of Kentucky reduced the gasoline tank wagon and station prices 1 cent in Cattletsburg and Ashland, Ky.

May 7—Magnolia Petroleum Co. reduced the gasoline tank wagon and station prices 1 cent in Muskogee, Okla., to 13 and 17 cents.

ENGINEERS HAVE NIGHT OF FUN AND LAUGHTER

Fun took the place of serious business at the May meeting of the Mid-Continent section of the Petroleum Division of the American Institute of Mining and Metallurgical Engineers, held Monday night of this week on the roof garden of the Tulsa Building, Tulsa. It was designated as a "Believe-It-or-Not" meeting, and human credulity was stretched to the breaking point by oil industry anecdotes drawn for the most part from personal experience. L. G. E. Bignell, president of the section, in opening the meeting assured the members that the bars were down and urged them to tell their best ones. The response was enthusiastic, voluminous and disastrous to vest buttons.

Dr. R. A. Smith, state geologist of Michigan, and William G. Heltzel, Sinclair Pipe Line Co. engineer, were guests. Both contributed to the program. Prof. H. C. George, School of Petroleum Engineering, University of Oklahoma, came from Norman to attend the meeting and he helped to keep the laughter from dying down.

A buffet luncheon preceded the program. No further meetings of the section will be held till September. It is said the Believe-It-or-Not meetings may be held annually hereafter.

MAGNOLIA'S P. L. STATEMENT

The Magnolia Petroleum Co.'s pipe line statement for April shows runs in Oklahoma and Kansas of 2,095,764 bbls.; shipments, 2,216,023 bbls., and stocks at the close of the month of 9,855,667 bbls. The company reduced its stocks by 32,171 bbls. in the course of the month.

CRUDE OIL PRICES

(Continued from Page 143)

Hogback (New Mexico) (July 27, 1928) 1.42

Note—Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

Luling (January 11)*	$1.85
Mirando (January 7)†	.80
Salt Flat (April 8, 1929)§	1.60
Rockdale-Minerva (April 15):	
Below 28 gravity	1.25
28-38.9 gravity	1.27
39-39.9 gravity	1.28
40 and above	1.31
Thrall‡	
Callihan (May 15)	1.75
Lytton Springs (Lockhart)	See gravity table
Somerset	See gravity table

*Posted by Magnolia Petroleum Co.
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.
‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight.
§Humble Oil & Refining Co.

EASTERN STATES

(Effective January 4, 1929)

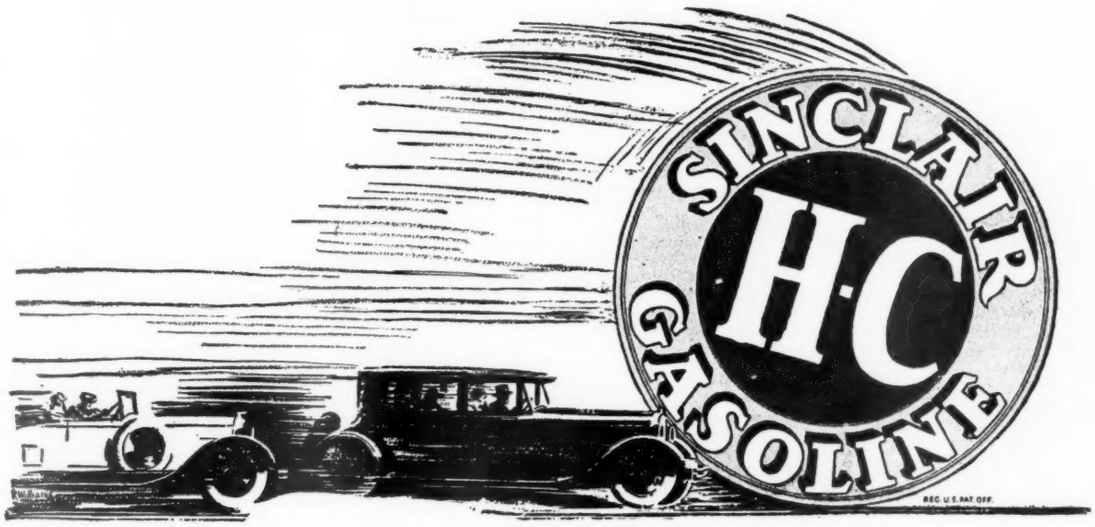
Penna Grade Oil in New York Transit Lines (New York)	$4.19
Bradford District Oil in National Transit Lines (Pennsylvania)	4.10
Penna Grade Oil in National Transit Lines (Pennsylvania)	4.00
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	4.00
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.90
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.85
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (April 27)	1.60
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s Line (January 25, 1929)	1.65
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s Lines (January 25, 1929)	1.75
Somerset Oil in Cumberland Pipe Line Lines (Kentucky) (March 12, 1929)	1.65
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (Jan. 29)	.50

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective April 26, 1929)

Lima	$1.65
Wooster	1.75
Illinois	1.60
Indiana	1.42
Princeton	1.60
Plymouth	1.18
Waterloo (November 17, 1926)	1.35
Western Kentucky	1.68
Dundee, Mich. (April 15, 1929)‖	1.00
Midland, Mich. (April 15, 1929)*	1.50
Saginaw, Mich., Saginaw Sand (February 10)†	1.89
Saginaw, Mich., Berea Sand (February 10)†	1.79
Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky, (March 16)‡	1.50
Oil in line in Stoll Oil Refining Co. in Oil City, Ky. (May 1, 1929)§	1.65
Oil Springs (Canada)¶ (April 26)	2.12
Petrolia (Canada)¶ (April 26)	2.04

*Posted by Pure Oil Co.
†Posted by Sun Oil Co.
‡Posted by Paragon Development Co.
§Posted by Stoll Oil Refining Co.
¶Posted by Imperial Oil Co., Ltd.
‖Posted by Standard of Indiana.



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SINCLAIR REFINING COMPANY, INC., 45 NASSAU STREET, NEW YORK ATLANTA BOSTON CHICAGO HOUSTON KANSAS CITY

Oils Believed on Way to Higher Levels

Recede Slightly in Sympathy With General Weakness of Market, but Promptly Begin Recovery. Week Shows New Highs

In sympathy with general weakness of the stock market the oil shares manifested a recessive tendency Monday, but renewal of strength was displayed the next day, and there was a feeling that a movement to distinctly higher levels was on its way. Notwithstanding disconcerting developments of the week in the oil industry itself, issues of the important companies behaved well. Standard of New Jersey made a new high for the year of 623/8. Gulf of Pennsylvania, a curb stock, also touched a new peak of 174, attributed to a widening realization of this company's big reserves.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Saturday, was as follows:

January 26	57.44
February 2	57.55
February 9	55.28
February 16	55.35
February 23	54.92
March 2	56.43
March 9	55.96
March 16	58.63
March 23	58.52
March 30	58.57
April 6	58.26
April 13	58.52
April 20	58.46
April 27	58.34
May 4	59.13
May 11	59.75

Continental-Marland

Directors of Continental Oil Co. have called special meeting of stockholders for June 17 at Portland, Me., to vote on proposed merger with Marland Oil Co., which will exchange approximately sixtenths share of its stock for every share of Continental.

Marland will exchange 2,317,266.35 shares of its common stock for every share of Continental Oil outstanding, which amounted to 3,645,242 shares as of December 31, 1928.

It is proposed to dissolve the Continental Oil Co. of Maine. C. H. Pforzheimer, S. H. Keoughan and John Evans, voting trustees, have concluded to dissolve the voting trust as of May 18. Before the close of business that day, when transfer books will close for the special stockholders' meeting, voting trustees will transfer to holders of voting trust certificates the respective number of shares of Continental Oil Co. stock represented by each voting trust certificate. Holders and owners of the voting trust and stock certificates whose certificates are not now registered in their own names are asked to send in their certificates promptly to New York Trust Co., to be transferred of record to them prior to closing of the books May 18. This is in order that transfer of stock represented by the certificates may be recorded on the books in their names so as to enable them to vote at stockholders' meeting June 17.

Rio Grande

Rio Grande Oil Co. reports for quarter ended March 31, 1929, net profit of $1,263,325 after depreciation, depletion, interest and Federal taxes, equivalent to $1.05 a share earned on 1,200,000 no-par shares of stock.

Income account for quarter ended March 31, 1929, follows: Sales, $5,200,379; costs and expenses, $3,135,491; operating profit, $2,064,888; interest, $19,120; depreciation and depletion, $621,893; Federal taxes, $160,550; net income, $1,263,325.

Standard of Indiana

Standard Oil Co. of Indiana declared a quarterly dividend of 62½ cents on new stock, payable June 15 to stock of record May 16, placing issue on $2.50 annual dividend basis. This is equivalent to a quarterly rate of 93¾ cents on the old stock prior to payment of the 50 per cent dividend March 15, when an extra cash dividend of 50 cents also was paid in addition to regular quarterly dividend of 62½ cents.

Previous to that the company had paid 62½ cents regular quarterly dividends and 25 cents extra quarterly, or total of 87½ cents. Present payment thus represents an increase of 6¼ cents quarterly.

Atlantic Refining

Atlantic Refining Co. declared an extra dividend of 25 cents and the regular quarterly dividend of 25 cents on the common, both payable June 15 to stock of record May 21. An extra dividend of 25 cents was also declared in the preceding quarter.

Vacuum Oil

Vacuum Oil Co. declared the regular quarterly dividend of $1, payable June 20 to stock of record May 31.

Sun Oil

Sun Oil Co. declared the regular quarterly dividend of 25 cents on the common, payable June 15 to stock of record May 25.

Panhandle P. & L.

Panhandle Producing & Refining Co. and subsidiaries report for quarter ended March 31, 1929, net profit of $32,919 after taxes, depreciation, depletion, amortization, intangible development costs, interest, etc., equivalent to $1.28 a share earned on 25,644 shares of 8 per cent cumulative preferred stock on which there are unpaid back dividends. This compares with net loss of $12,532 in first quarter of 1928.

Empire Gas & Fuel

Empire Gas & Fuel Co. declared regular monthly dividends of 50 cents on 6 per cent preferred, 54 1-6 cents on 6½ per cent preferred, 58⅓ cents on 7 per cent preferred and 66⅔ cents on 8 per cent preferred, all payable June 1 to stock of record May 15.

Amerada Corp.

Amerada Corp. reports for quarter ended March 31, 1929, net income of $50,762, after depreciation, depletion and Federal taxes, equivalent to 6 cents a share earned on 922,075 no-par shares of stock. This compares with $559,893, or 61 cents a share, in first quarter of 1928.

Ohio Oil

Ohio Oil Co. declared regular quarterly dividend of 50 cents on common, payable June 15 to stock of record May 15.

Warner-Quinlan

Warner-Quinlan Co. reports for quarter ended March 31, 1929, net profit of $211,207 after depreciation, depletion, Federal taxes, etc., equivalent to 43 cents a share on $488,359 no-par shares of stock, comparing with $141,251, in first quarter of 1928, equal to 59 cents a share on 240,380 shares then outstanding. Gross income for the quarter was $3,471,200, against $2,384,432 in the March quarter of 1928.

United Carbon

Net profit of United Carbon Co. and subsidiaries for quarter ended March 31, 1929, was $412,886 after depreciation, depletion, interest and provision for contingencies and Federal taxes, against $142,732 in first quarter of 1928.

Northern Pipe Line

Northern Pipe Line Co. has declared regular semiannual dividend of $2, payable July 1 to stock of record June 7.

Imperial Oil

Imperial Oil, Ltd., declared a quarterly dividend of 12½ cents, placing stock on 50 cents annual basis, equivalent to $2 on old stock, before four-for-one split up. Old stock has been on $1 annual basis, with extras. The dividend is payable June 1 to stock of record May 31.

Missouri-Kansas Pipe Line

Common stockholders of Missouri-Kansas Pipe Line Co. of record May 20 are offered the right to subscribe at $30 a share to additional stock to the extent of one-sixth of their holdings. Rights to subscribe expire June 10.

Standard of New Jersey

Walter C. Teagle, president of Standard Oil Co. (New Jersey) has proposed to shareholders a profit sharing plan for executives permitting directors and officials to participate in the profits as special compensation. The plan, if endorsed, will run five years. The plan provides that the amount actually distributed in one year as management's share in profits shall not exceed one-fifth of 1 per cent of net assets of the company at the close of the previous year. The plan will not be effective unless the earnings of the company exceed 7 per cent of the capital invested. Of the amount to be distributed in any one year 50 per cent would go to the directors and the balance to other officials, Mr. Teagle himself foregoing participation. The directors of the New Jersey company are mainly managing directors of the various departments of the business and subsidiaries. Stockholders will vote on the plan at the annual meeting June 11.

Oklahoma Gas & Electric

Oklahoma Gas & Electric Co. declared the regular quarterly dividend of $1.75 on the preferred, payable June 15 to stock of record May 31.

INDEPENDENT OILS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Kennedy Building, Tulsa, Okla.

1926 High	1926 Low	1927 High	1927 Low	1928 High	1928 Low	Par value	Stocks	For week ended May 10 Sales	Open	High	Low	Last	Change
$6.75	.45	2 7/16	.55	1½	.53	$5	Amer. Con. Oilfields	12,800	½	9/16	5/8	½	
..	..	7½	2¾	9½	3⅛	N.P.	Amer. Maracaibo	2,600	.....	5	4½	4⅞	+ ¼
..	..	2¾	1	4½	2¼	$10	Argo Oil	8,500	4	4	4	4	— ¼
85¼	60	40	20½	55	32¾	N.P.	British American	100	49½	49½	49½	49½	— ¼
28⅜	9¼	28¼	15½	4½	3⅞	25c	Carib. Syndicate (new)	4,600	3⅛	4	3⅛	3⅝	+ ½
..	..	58¾	40¼	90⅞	54	$20	Cities Service	28,800	29¼	116¾	115⅝	116¼	— ¼
..	..	95⅝	87	103½	94½	100	Cities Service, pfd.	1,800	98	98¼	97⅞	98¼	+ ⅛
..	..	8⅞	7⅜	9⅝	8⅞	10	Cities Service, pfd. B	No sales.					
3½	1¾	3⅞	1⅛	3¼	76	1	Colombia Syndicate	2,500	1¼	1¼	1⅛	1¼	
..	..	9⅜	6⅜	8⅞	6¼	10	Consolidated Royal	1,100	.....	7⅞	7⅛	7⅜	— ⅛
16	10	14⅞	9½	17½	9½	N.P.	Creole Syndicate	3,800	8⅞	9	8⅝	8⅝	— ⅜
..	..	3	.50	3¼	.76	N.P.	Crown Central	1,400	1⅞	1⅞	1⅜	1⅜	
7⅞	6¾	12	4	33½	3¼	N.P.	Darby Petroleum	2,700	16¾	34⅞	30½	33¾	+ 3½
..	..	2½	74	2¼	1	N.P.	Derby Oil & Refining	700	4	4	3¾	4	+ ¼
..	..	16¾	4	21⅛	7½	N.P.	Derby Oil & Refining, pfd.	No sales.					
..	..	2	.40	.53	.15	N.P.	Gilliland ctfs.	No sales.					
98	92	118	86¼	165	101⅛	$25	Gulf Oil Corp.	49,500	162⅞	168½	160⅛	167⅝	+ 4½
$3.00	.83	2½	.80	3⅜	1	5	Intercontinental Pet.	52,400	2¼	2⅝	2	2⅝	+ ⅜
..	..	2¼	1¼	3	1¼	N.P.	Kirby Petroleum	31,800	2	1⅞	1½	1¾	— ¼
12¼	5⅜	10⅞	5⅛	9⅜	5⅛	25	Leonard Oil & Dev.	3,600	5	5	5	5	
27	20	27½	20	43⅞	20	N.P.	Lion Oil & Refining Co.	9,900	36	38⅞	35¾	37½	+ 2
46	30	59⅜	37	69⅛	48⅛	$25	Lone Star Gas	500	73⅞	73⅞	73⅛	73½	— 1⅜
2⅞	1	2⅞	.80	1⅞	.50	1	Magdalena Syndicate	7,100	9/16	9/16	½	9/16	
34	12½	52	12	48½	32	N.P.	Margay Oil	No sales.					
8	5½	12⅛	5	8	2¾	N.P.	Mexico-Ohio Oil	7,200	5	5	5	5	
1¾	1⅛	1½	1	1¾	.76	$1	Mountain & Gulf	1,600	1⅛	1¼	1⅛	1¼	+ ⅛
26	23	29¼	22¾	28⅞	19½	10	Mountain Producers	6,800	18½	18½	17⅜	17⅞	— ⅜
6⅝	5	5⅞	4⅝	5⅝	4¼	5	New Bradford	1,300	4	4	4	4	
..	..	16	9¼	11⅞	7⅛	1	New Mex. & Ariz.	1,000	6¾	6⅞	6¾	6⅞	+ ⅜
..	..	12¾	9½	14¼	8½	N.P.	North Central Texas	200	11⅛	11½	11	11⅛	
10⅛	5⅞	9⅜	3¼	6	2⅛	N.P.	Pandem	1,200	2⅛	2¼	2⅛	2⅛	+ ⅛
12¼	11¾	12⅛	7	15⅝	8½	N.P.	Pantepec Oil	1,300	7⅛	7¼	7	7⅛	
22¾	12	13½	5⅛	7¾	4⅞	N.P.	Pennok Oil	No sales.					
17	8½	24⅜	7	18	4⅞	25	Red Bank Oil	No sales.					
30¼	12	15½	3½	12⅞	4⅛	N.P.	Reiter-Foster	2,500	5⅛	5⅞	5¼	5⅞	+ ¾
7	4½	7	4½	12	4⅛	N.P.	Ryan Consolidated	200	7	7⅜	6⅝	7¼	
10	7⅛	8	5¼	7¼	5½	$10	Salt Creek Cons.	200	3½	3½	3½	3½	+ ¼
35	24⅛	35½	27¼	35	23⅛	10	Salt Creek Prod.	1,600	20	20⅞	19⅛	20⅜	+ ⅜
6⅞	1¼	7	1¼	3½	1	5	Savoy Oil	No sales.					
27	7⅝	26½	17	22⅞	13	10	Tidal Osage	1,100	14⅞	15	14	15	+ ⅛
25¾	7⅝	23¾	15	21¼	13⅛	10	Tidal Osage, nonvoting	4,700	13⅝	14⅞	13⅝	14¾	+ 1⅝
92	63½	92	63½	93¾	75	100	Transcontinental, pfd.	1,800	90	109¾	90	107	+18
8	4½	7⅜	4¼	9⅛	4¾	5	Venezuelan Petrol	1,100	4¾	4¾	4⅝	4¾	+ ⅛
8⅛	5½	8	4¾	8¼	4⅞	$1	Woodley Petroleum	600	6	6	5¾	5¾	+ ¼
6½	6	6	1¾	8⅜	2⅛	25	Y Oil & Gas (new)	300	2¾	2¾	2⅝	2⅝	— ⅛

TRANSACTIONS IN OIL SHARES ON NEW YORK STOCK EXCHANGE

Quotations Compiled by Francis, Bro. & Co., Members of New York Stock Exchange, Kennedy Building, Tulsa, Okla.

1926 High	1926 Low	1927 High	1927 Low	1928 High	1928 Low	Listed capital	Par value	Stocks—	Div. rate	Last paid	For week ended May 10 Sales	Open	High	Low	Last	Change
32⅞	24¼	37⅝	27⅝	43⅞	27⅛	(sh) 922,075	N.P.	Amerada Corp.	50cQ	Oct. 31, 28	8,400	.....	33¾	30⅝	32	— 2
74	39⅞	82⅛	35⅛	85	51¼	(sh) 209,180	N.P.	American Republics Corp.	.....	.....	8,400	55⅛	57⅜	53	54½	— 1
60	44¾	50¼	35	53⅜	37½	$57,260,300	$25	Associated Oil	50cQ	Dec. 31, 28	60	45	45¼	45	45	
128⅜	97	131⅜	104	66⅜	50	50,000,000	25	Atlantic Refining	25cQ	Dec. 15, 28	294,000	67½	71½	67½	70⅞	+ 1⅝
33½	23½	35½	20¾	53	20	35,194,000	25	Barnsdall Corp.	50cQ	Feb. 5, 29	224,400	44⅞	49⅛	44⅛	48¼	+ 3¼
94½	50	96¾	65	94⅞	68	20,785,400	100	General Asphalt	.....	.....	39,600	80½	82	77¾	79	— 2
72	50¼	175⅝	60¼	167	79	25,000,000	100	Houston Oil	.....	.....	13,900	96¾	100	96	97⅝	— 1⅝
34	19⅝	32¾	17⅝	38¾	21¾	(sh) 959,457	N.P.	Independent Oil & Gas	50cQ	Jan. 31, 29	73,800	37⅞	39⅛	37½	38¾	+ 1
12¾	7½	12⅛	7⅝	39⅝	9	8,203,080	$10	Indian Refining	.....	May 31, 24	67,200	49	50¼	47	48½	— ⅝
25⅞	16½	37¾	20½	39⅛	27⅜	(sh) 3,992,122	N.P.	Lago Oil & Transport	.....	May 1, 27	1,100	29⅞	30⅞	29½	29½	— ⅞
19⅞	12	18⅛	10	19¾	9⅜	(sh) 1,237,078	N.P.	Louisiana Oil Refining	.....	.....	37,800	14¼	15½	14	15⅛	+ 1
28	16½	22¾	12	25½	12½	(sh) 330,000	N.P.	Maracaibo Oil	.....	.....	1,300	17¼	17¼	16½	16½	— ½
63⅜	49¼	58½	31	49¾	33	(sh) 2,316,692	N.P.	Marland Oil Co.	.....	Mar. 31, 27	42,500	40	40⅝	38¼	38¾	— 1⅜
13¾	6	9¼	3	73	4⅝	(sh) 945,939	N.P.	Mexican Seaboard	.....	Dec. 15, 20	43,100	56	57⅜	52½	54½	— 1½
37	20½	39⅜	25½	44½	25⅛	(sh) 1,357,461	N.P.	Mid-Continent Petroleum	50cQ	Feb. 15, 29	35,900	35½	36¾	35	36¼	+ ½
104¼	90	105	97	120½	103¼	$6,718,000	$100	Mid-Continent Petroleum pfd.	$1.75Q	Sept. 1, 28	No sales.					
2½	½	3¾	1⅝	7⅜	2⅜	24,298,850	10	Middle States	.....	July 1, 23	21,500	4⅛	4¾	4	4½	+ ⅜
76½	56⅛	65⅞	40⅛	54⅞	38¼	$48,807,400	$50	Pan American P. & T.	.....	Oct. 20, 27	4,800	61	62⅝	59¾	60½	— 2½
78⅜	56⅞	66⅜	40¼	58⅞	37¾	121,097,900	50	Pan American P. & T. B.	.....	Nov. 15, 24	264,700	64⅜	66¾	61½	63¼	— 3¼
46	30	37⅞	16¾	28⅜	15½	(sh) 400,000	N.P.	Pan American Western B	.....	Jan. 30, 27	No sales.					
32	4½	18⅞	8	21¾	11½	(sh) 198,770	N.P.	Panhandle P. & R.	.....	.....	2,200	13	13¾	12¾	13½	+ ½
99⅜	51	83	54	108	70	$2,935,200	$100	Panhandle P. & R. pfd.	.....	July 2, 23	No sales.					
57⅜	40	60¼	36¼	53⅞	35¼	(sh) 2,406,796	N.P.	Phillips Petroleum	37½cQ	Jan. 2, 29	15,900	42½	43¼	41½	42	+ ¾
....	....	1⅛	½	5¼	½	$29,622,925	$25	Pierce Oil Corp.	.....	.....	4,000	2⅝	2¾	2½	2⅝	
7	2¼	5½	2½	7	3½	(sh) 2,500,000	N.P.	Pierce Petroleum	.....	.....	9,500	5⅛	5¼	4⅞	5¼	+ ⅛
60¼	48	55½	45⅝	68	46	60,000,000	25	Prairie Oil & Gas	.....	Aug. 31, 27	9,400	59⅞	60½	59⅞	59½	— ⅜
137½	122½	190	130¾	280	172	$101,250,000	$25	Prairie Pipe	75cQ*	Mar. 31, 29	9,700	61	61½	59½	60⅛	— ⅞
20¾	11	33⅞	16¾	29⅞	16	$37,450,850	$50	Producers & Refiners	.....	Sept. 15, 23	3,200	21¼	21⅞	21	21½	+ ¼
41¾	30¾	50	36⅞	49⅝	41	2,845,350	50	Producers & Refiners pfd.	.....	May 1, 25	80	43	43½	41½	43½	+ ½
31	25¼	33½	25	31⅝	19	75,959,350	25	Pure Oil Co.	25cQ	Dec. 1, 28	168,400	29⅜	30¾	29⅜	30	+ ⅜
27½	22	28⅝	25⅜	56	23	47,025,000	$25	Richfield Oil	.....	Nov. 15, 28	40,200	45½	47½	45⅝	47	
57⅜	47⅜	54½	44¼	64	44⅝	(sh) 611,303	13.40	Royal Dutch, N. Y. shares	50cQ	Jan. 10, 29	1,700	52⅜	52¾	52⅛	52¼	— ⅛
48⅝	40½	47⅞	41⅜	57½	40⅝	(sh) £30,000,000	£1	Shell Transport & T.	$1.455	July 23, 28	No sales.					
31	24	31⅜	24⅝	39¼	23¼	(sh) 20,000,000	N.P.	Shell Union Oil	35cQ	Dec. 31, 28	25,900	29¾	30⅝	29¼	29⅝	— ½
28⅝	15⅛	26⅜	14¼	27¼	18⅛	$8,357,000	$10	Simms Petroleum	10cQ	Dec. 15, 28	79,400	33	33⅛	29⅞	30½	— 1⅞
24⅞	16¾	22⅜	15	46¾	17⅜	(sh) 4,501,915	N.P.	Sinclair Consolidated	.....	.....	192,900	38¾	39¾	37⅝	39¼	
99½	90	104½	97	110	102½	$16,604,600	$100	Sinclair Consolidated pfd.	$2Q	Nov. 15, 28	No sales.					
37⅛	26⅝	37⅜	24⅛	42⅝	25	27,396,590	25	Skelly Oil Co.	50cQ	Dec. 15, 28	55,000	45⅞	46½	43¾	44¾	— 1½
63⅝	51½	60¾	50⅝	80	53	(sh) 12,594,098	N.P.	Standard Oil of California	65½Q	Dec. 15, 28	2,206	78⅜	81⅞	78¾	79⅞	+ 2
46⅜	37½	41⅜	35⅛	59⅜	37⅜	$611,120,700	$25	Standard Oil of New Jersey	25cQ*	Dec. 15, 28	158,500	59⅝	62¼	60	62	+ ⅝
47¼	30⅜	34⅛	29¾	44¼	28¾	427,973,275	25	Standard Oil of New York	40cQ	Dec. 15, 28	8,800	43⅜	43⅞	42⅜	43¼	
41⅝	30⅛	34⅞	30	77	31½	(sh) 1,206,073	N.P.	Sun Oil	25cQ	Dec. 15, 28	5,300	64	64⅝	63⅛	64⅜	+ ½
5¼	1	6½	3⅛	14¼	2½	(sh) 1,267,000	N.P.	Superior Oil Corp.	.....	Dec. 20, 20	39,600	8⅝	8⅞	8⅜	8⅝	— ⅛
58	48	58	45	74¾	50	$211,076,650	$25	The Texas Corporation	75cQ	Jan. 1, 29	50,800	66¼	67⅜	64⅜	66¼	— ¾
19½	12	18⅞	12	26⅝	12⅛	8,380,340	10	Texas Pacific Coal & Oil	.....	Jan. 3, 28	22,400	21⅛	21	19¾	20¼	— ¼
39¼	27	29⅛	19	41½	19⅝	(sh) 2,168,410	N.P.	Tide Water Oil Co.	20cQ	Dec. 15, 28	14,800	35¼	38	35½	37½	+ 2¼
103	87¼	90⅛	85	100⅛	86	$20,705,200	$100	Tide Water Oil Co. 5% pfd.	65½cQ	Dec. 15, 28	1,900	88	95¾	95	95½	+ 1
27	20⅞	19⅛	15¾	25	14⅜	(sh) 4,796,158	N.P.	Tide Water Associated	.....	Aug. 1, 27	202,000	20	23⅜	20¼	22⅝	+ 2⅝
5½	3	10⅜	3¾	14¾	7¼	(sh) 3,742,029	N.P.	Transcontinental Oil	.....	.....	410,500	11⅝	14¼	11¼	13⅜	+ 2¼
58⅜	37¼	56½	39⅝	58	42¾	$94,798,100	$25	Union Oil of California	50cQ	Nov. 10, 28	11,200	50¼	51	49⅝	50	— 1⅜
120⅜	84¼	127½	94	128⅛	110	31,061,200	100	Union Tank Car Co.	$1.25Q	Dec. 1, 28	500	140	140	140	140	— 6
30⅛	23½	34½	24½	44⅞	26	(sh) 356,000	N.P.	Warner Quinlan	50cQ	Jan. 2, 29	10,800	35¼	35⅞	34¼	34¼	— 1
29¾	25⅛	27½	20	38	20⅛	(sh) 490,000	N.P.	White Eagle Oil & Refining	50cQ	Jan. 20, 29	2,200	35½	36	35½	35¾	+ ⅛
								Wilcox Oil & Gas	.....	.....	10,200	27⅞	28¾	26½	27	— ⅝

*Also extras. †Ex-dividend.

STANDARD OIL STOCKS ON NEW YORK CURB

21	16	21⅝	17¾	22⅜	14⅞	£4,126,460	£1	Anglo-American Oil	.....	June 6, 28	8,300	15	15⅛	14¾	15	
....	....	3¾	¾	5	1¼	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	800	1½	1⅞	1½	1⅞	+ ⅞
76	65	69	50	56½	44½	1,000,000	25	Borne Scrymser	$1S.A.	Oct. 15, 28	200	40½	41¾	40	41¾	
59½	42	60	45	76	53	10,000,000	50	Buckeye Pipe Line	$1Q	Dec. 15, 28	400	71	71	70⅝	70⅜	+ ¾
82½	65	126	76½	161	117	3,000,000	25½	Chesebrough Mfg.	$1Q	Dec. 28, 28	200	170	170	169¾	169¾	— ½
25⅞	17½	22⅝	16¼	23	16	36,057,840	10	Continental Oil	.....	Dec. 15, 27	18,400	23⅜	24⅜	22⅝	22¾	— 1½
137	102	137	89	114	67	1,500,000	50	Cumberland Pipe Line	$1A	Dec. 15, 28	No sales.					
63¾	43	68½	47	88	64⅛	5,000,000	100	Eureka Pipe Line	$1Q	Nov. 1, 28	No sales.					
32½	9⅞	13½	3½	13	4¼	16,000,000	100	Galena Signal Oil	.....	June 30, 25	No sales.					
68½	52	68½	54	114¾	59¼	73,117,577	25	Humble Oil & Refining	30cQ*	Jan. 1, 29	21,800	121⅞	124½	117¾	121½	
144½	125½	182	123¾	290½	176½	20,000	100	Illinois Pipe Line	10%S.A.	Dec. 15, 28	400	340	340	339	339	— 1½
....	....	64¾	37¾	104	56¾	(sh) 6,458,267	N.P.	Imperial of Canada	25cQ	Dec. 1, 28	2,400	.....	117¾	115	116	— ½
72½	58	94½	61	91⅞	74⅜	$5,000,000	$50	Indiana Pipe Line	$1Q	Feb. 15, 29	700	90¼	92⅜	90¼	92⅜	+ 1⅜
35½	28¾	39	28¼	55	35	(sh) 7,123,444	N.P.	International Petroleum	25c	Nov. 30, 28	4,900	53½	55	53	53½	— ¾
20⅜	12½	24	13½	32⅜	19⅜	$6,363,350	12.50	National Transit Co.	25c	Dec. 15, 28	2,000	24⅜	24½	23½	24	— ¼
51½	27¼	44½	31¼	75	38½	5,000,000	100	New York Transit	.....	July 15, 26	350	82	85	83½	84¾	+ 2¾
80½	64	100	70	69	56½	2,000,000	50	Northern Pipe Line	$3S.A.	Jan. 2, 29	500	59	60	58⅞	59½	+ ½
67¾	55¾	67⅞	52	84	58½	60,000,000	25	Ohio Oil Co.	50cQ*	Dec. 15, 28	900	70½	71	70	70⅞	+ ⅜
24¾	15	39	12	84	28	10,000,000	25	Penn Mex. Fuel	$1.25	Dec. 15, 28	100	31	31	31	31	+ ⅜
220	84½	201½	175½	220	167	4,000,000	100	Solar Refining	$5S.A.	Dec. 20, 28	300	44	44	43¾	43⅞	— 1
74½	61½	27¼	15½	19	15	1,000,000	10	Southern Pipe Line	$2	Dec. 1, 27	1,000	21½	21⅞	20⅛	20⅞	— ⅛
50	34½	41½	35	71⅞	36¾	2,000,000	25	South Penn Oil	50cQ	Dec. 31, 28	2,500	57½	58⅝	56½	57	— 1½
56	47½	83	55½	102	70	3,500,000	100	Southwest Pa. Pipe Lines	$1Q	Oct. 1, 28	50	68	68	68	68	+ ¼
70½	60½	81½	64⅝	95⅞	70⅞	228,415,463	25	Standard Oil of Indiana	61½cQ	Dec. 15, 28	34,500	59¼	60¼	58¼	58½	— ⅝
36½	16½	20⅞	14⅝	27¾	15	8,000,000	25	Standard Oil of Kansas	.....	June 16, 24	500	19¼	19⅛	18⅞	18⅞	— ⅜
134⅜	108	130	111½	179¾	122¼	17,012,559	10	Standard Oil of Kentucky	$1Q	Dec. 31, 28	6,800	39⅝	40	38⅝	39	— ⅝
51⅛	42	49½	40	54⅞	39⅞	4,559,850	25	Standard Oil of Nebraska	63cQ	Dec. 20, 28	100	49¼	49¼	49⅛	49⅛	— ⅝
372	288	87½	72	134	71	14,000,000	25	Standard Oil of Ohio	62½cQ	Jan. 2, 29	700	128½	129	127	127¾	— ¾
21	15	21	14½	23½	16	861,000	25	Swan Finch Co.	.....	Nov. 1, 19	300	15	15	15	15	
109⅜	90¼	....	....	111	72	125,619,000	25	Vacuum Oil	75cQ	Dec. 20, 28	5,300	124½	127⅜	123⅛	124¾	— ¾

*Also extras.

Standard of New York

The annual meeting of the stockholders of the Standard Oil Co. of New York will be held May 31, for the purpose of electing directors, considering and voting upon a proposition to change the number of directors from 14 to not less than a minimum of 5 nor more than a maximum of 18.

INTERCONTINENT CO. IN TURKISH PETROLEUM

Control of a 75 per cent interest in the Turkish American Petroleum Corp., which owns 12 concessions in European and Asiatic Turkey, has been acquired by the Intercontinent Petroleum Corp. whose stock is listed on the New York Curb, London Stock Exchange and Brussels Bourse. Five of the concessions are on the seaboard. H. T. O'Brien, for 14 years with the Standard Oil Co. in Rumania, has been placed in charge of the property and has opened offices in Constantinople.

One concession consists of more than 1,000,000 acres adjacent to the British mandate of Iraq and the French mandate of Syria. It also borders the property now controlled by the Anglo-Persian Oil Co. It is proposed first to drill the property in European Turkey. Machinery for drilling has been ordered.

MAGNETOMETER STUDY OF STATE OF MISSISSIPPI

(Continued from Page 34)

Lexington, Holmes County; Canton, Madison County; Brandon, Rankin County, to Mendenhall, Simpson County.

5. Northeast through Vicksburg, Warren County.

6. Meridian, Lauderdale County, through Quitman, Clarke County.

7. Cleveland, Bolivar County, to Greenville, Washington County.

Magnetic Anomalies

If a general regional correction be applied to the values of vertical intensity in order to take care of a normal general decrease in intensity as the distance from the north magnetic pole is increased, then there will result the magnetic anomalies.

Plate 2 shows the anomalies obtained when such a regional correction is applied to the value of the vertical intensities computed from the United States Coast and Geodetic Survey readings. The base for this regional correction has again been taken at Longitude 95 degrees west, Latitude 40 degrees north.

At each of the stations are shown two figures; those marked with an X are hypothetical values obtained by applying the regional corrections just mentioned and are the values used in contouring Plate 2.

Magnetic Highs

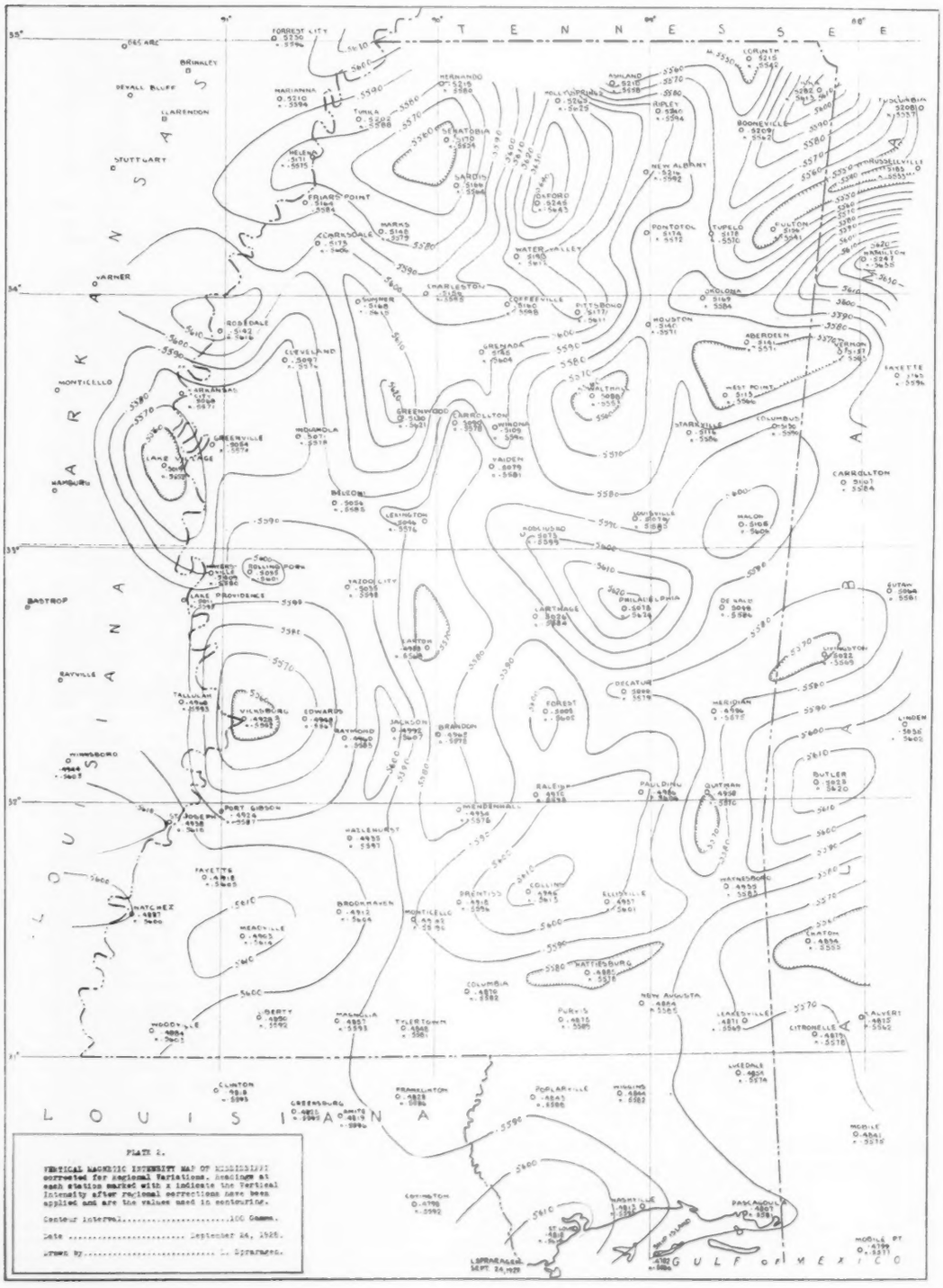
Plate 2 shows the following magnetic highs:

1. Iuka, Tishomingo County.
2. Oxford, Lafayette County.
3. Okolona, Chickasaw County.
4. Macon, Noxubee County.
5. Philadelphia, Neshoba County.
6. Forest, Scott County.
7. Collins, Covington County.
8. Bay St. Louis, Hancock County.
9. Greenwood, Leflore County.
10. Rolling Fork, Sharkey County.
11. Jackson, Hinds County.
12. Meadville, Franklin County.

Magnetic Lows

1. West Point, Clay County.
2. Walthall, Webster County.
3. Senatobia, Tate County.
4. Canton, Madison County.
5. Vicksburg, Warren County.
6. Quitman, Clarke County.
7. Cleveland, Bolivar County.

The reader's attention is again called to the fact that these anomalies are based on only a comparatively few stations and are contoured on a 100-gamma interval. Needless to say that if a detailed study were made of any of these high or low areas it would undoubtedly be found that these highs and lows presented above would themselves be made up of local highs and lows, particularly if the contour interval is taken at 25 gamma or less.


T E N N E S S E E
A R K A N S A S
L O U I S I A N A
M I S S I S S I P P I
G U L F of M E X I C O
PLATE 2.
VERTICAL MAGNETIC INTENSITY MAP OF MISSISSIPPI
corrected for regional variations. Readings at each station marked with x indicate the vertical intensity after regional corrections have been applied and are the values used in contouring.
Contour interval.....100 Gamma.
Date ..... September 24, 1928.
Drawn By..... L. Sprarrager.

EAST CENTRAL TEXAS DELAYED BY FISHING

By Neil Williams

CORSICANA, Tex., May 13.—Operations in East Central Texas, both in the inland salt dome area and also in the fault zone, were inactive the past week. There were no completions and many rigs were shut down or delayed by fishing jobs. Daily average production was steady, showing a decline of only 1 bbl. Humble Oil & Refining Co. has another test on the sand at Boggy Creek but this probably will not be tested for several days.

The latter test is No. 2 Roberts in which 6⅝-inch casing has been cemented at 3,518 feet. Other operations at Boggy Creek include Humble's No. 2-B Elliott & Clark, drilling shale at 1,958 feet; No. 1 Neches River, drilling shale and lime at 2,073 feet; No. 1 Holt, waiting cement to set at 2,611 feet; No. 2-A Todd, drilling sand at 1,150 feet, No. 1 Beard, a rig.

Humble Oil & Refining Co. is moving a rig in for its No. 3-A Southern Pine on the Posey Saline, 8 miles south of the Boggy Creek Dome in Anderson County. On the Bethel Dome, Pure Oil Co.'s No. 1 Johnson is drilling at 1,634 feet. J. S. Cosden and associates' No. 2 Douglas, Keechi Dome, still is shut down with drill stem stuck at 3,861 feet.

Amerada Petroleum Corp.'s No. 1 Wade, Upshur County, is drilling at 3,632 feet, and in Rusk County, Magnolia Petroleum Co.'s No. 1 Duran is drilling shale and boulders at 1,445 feet.

In Falls County, Humble Oil & Refining Co.'s No. 1 Pucek has spudded in and set a string of surface casing at 93 feet. Caruth & Stewart's No. 2 Flowers, Falls County, is drilling shale at 365 feet; Killan & Phillips' No. 1 Jones, same county, is drilling sandy lime at 1,718 feet. Hoosier and associates' No. 1 Naussbaum, Freestone County, is drilling broken chalk at 2,652 feet.

C. F. Lytle's No. 1 Thompson, Mexia Trinity sand test, Limestone County, is recementing casing at 6,161 feet after testing salt water several weeks ago. Donoho & Smith's No. 1 Oliver, same county, is drilling gumbo at 2,416 feet. Segal and associates' No. 1 Runnels, Limestone County, is spudding.

In McLennan County, Killam & Phillips' No. 1 Roach, Toby Survey, is drilling broken lime and shale at 867 feet. These operators' No. 2 Bryant, Naber Survey, is drilling broken lime at 710 feet.

Bunswell & Hill's No. 1 Booher, east of Melano, Milam County, is drilling sandy lime at 1,772 feet. J. M. Burkhead's No. 1 Weignam, same county, is drilling rock at 320 feet. E. L. Chapman's No. 1 Gilchrist is drilling rock at 820 feet; Goreman Brothers' No. 1 Dornheifer is drilling shale at 1,425 feet; Rodgers & Heep's No. 1 Duncan is drilling shale at 1,540 feet and A. H. Wray's No. 1 Fowler is rigging.

Transcontinental Oil Co.'s No. 1 Dearden, Navarro County, is drilling below 2,767 feet. W. D. Alexander and associates' No. 1 Anderson, Robertson County is drilling shale at 1,631 feet.

Leon County, in which at present drilling operations are shut down, came in for a leasing play during the week when The Texas Company took an option on approximately 15,000 acres in the Simon Sanches Survey. This county has been watched closed particularly since the recent discovery of what appears to be another inland salt dome in the northwestern part of the county:

Daily average production for the week ending May 11 was:

Boggy Creek	2,700
Cedar Creek	110
Currie	435
Mexia	5,250
Minerva	150
Nigger Creek	250
Powell	8,225
Richland	350
Thrall	50
Wortham	1,245
Total	19,480
Total previous week	19,490
Decrease	10

CALIFORNIA DELEGATION TO TULSA CONVENTION

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the Natural Gasoline Industry," G. M. Davidson, Empire Oil & Refining Co.; A. J. Schlosser, Barnsdall Oil Co.

Discussion.

Paper, "Is Present Gasoline Storage Adequate to Best Serve the Industry?" H. C. Charles, Phillips Petroleum Co.; A. F. Wood, Chestnut & Smith Corp.

Discussion.

Noon

Dutch lunch, furnished by Natural Gasoline Supply Men's Association.

Afternoon Session

Paper, "The Practical Application of Gas Analysis to the Operation of Gasoline Plants," prepared by W. W. Robinson, Jr., The Texas Company, P. S. Magruder, General Petroleum Corp., J. C. Burks, O. C. Field Gasoline Co., and E. R. Cox, The Texas Company.

The paper will be read by W. W. Robinson, Jr.

Discussion, R. O. Campbell, Skelly Oil Co.

Paper, "Report on the Work of the Technical Committee of the Natural Gasoline Association," G. G. Oberfell, Phillips Petroleum Co.

Discussion, R. E. Baker, Shell Petroleum Corp.

Evening

Annual dance, Natural Gasoline Supply Men's Association.

STATE FIXES 725,000 BBLS. AS PRODUCTION LIMIT

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duction of the Seminole area it was decided that it would be useless to go before the Corporation Commission with the petition that called for unanimity of action.

Fitzpatrick's Position

It was at this point that W. S. Fitzpatrick, chairman of the board of directors of the Prairie Oil & Gas Co., addressed the meeting.

Mr. Fitzpatrick said his company had done more than its full share in holding down production. It had even given its Seminole field forces a Sunday lay-off at its own expense and it had agreed to a proration of runs. As a purchaser of oil it had for many months absorbed a large surplus of crude oil, steadily piling up the quantity of crude it had in storage. He intimated that the company had suffered a loss in performing this service to Oklahoma producers. It was unfair, he said, to expect the company to draw upon its stock at the present price of crude oil. It was unfair to ask the Prairie Oil & Gas Co. to suffer an actual loss while the companies that were so eager to keep production down to 650,000 bbls. a day were doing nothing to slow down their refineries. His company was losing customers to refiners who were offering premiums for crude, Mr. Fitzpatrick said, while his company was unable to supply its customers unless it drew the oil from its storage tanks. He intimated that the price of crude was too low, yet his company "couldn't raise the price while this talk of overproduction in Oklahoma is broadcasted."

The Prairie Oil & Gas Co. has 15 cus-

The Prairie Oil & Gas Co. has 15 customers demanding more crude oil from the Mid-Continent he said. Their refineries were built to handle "sweet" crude. Their natural source of supply is the high grade oil fields of the East, the Central West and Oklahoma and Kansas. The supply is diminishing in the fields east of the Mississippi and they must fall back on Kansas and Oklahoma. The Prairie Oil & Gas Co., he continued is asked to supply from 25,000 to 40,000 bbls. a day more than it can produce and purchase in this territory to fill the demands of its customers. Mr. Fitzpatrick said these refiners are all experienced business men. "It is idle to say that they don't know how to run their own affairs or that they don't know their own crude requirements," he said.

Not Invading Other Territory

The speaker pointed out that Oklahoma crude oil was not invading the territory of any other state's production. "All we ask is that we be permitted to supply our own refining territory with crude from the same territory." We have no intention of invading California's market or that of Texas. Mr. Fitzpatrick indicated how the Prairie Oil & Gas Co. differs from other large oil companies. "We are simply producers," he said. "We sell our oil just as any other producer sells his oil. If we cannot supply our customers with enough from our own production we go out and buy your surplus. That is why I say that when we buy your excess in times of overproduction you should not expect us to sell it at a loss in times of underproduction."

Mr. Fitzpatrick called attention to the fact that Pecos County, Texas, producers had voted for an increase of their production to 100,000 bbls. a day. His company, he said, asked for no more production in Oklahoma than the refining industry would absorb by purchase. He readily agreed to a limit of 725,000 bbls. as representative of current crude demand.

AVERAGE GRAVITY OF CRUDE OIL IS 32.2 A.P.I.

(Continued from Page 140)

pear that the average gravity should have shown more than a 0.2 per cent gain over 1921. That this did not occur was due to the fact that in the period following 1921 important heavy oil discoveries were made, notably the Smackover Field of Arkansas.

The highest average gravity for any state was 48.5 degrees, credited to New Mexico. This state can also claim the highest gravity crude yet produced in quantity, that is, the crude from the Rattlesnake Field in San Juan County. This crude has been assigned a gravity of 65 degrees A.P.I., but has actually been tested as high as 75 degrees A.P.I., corrected for temperature. In as much as the gravity of the average motor fuel is about 60 degrees, it is not hard to realize the difficulty experienced in handling such a "wild" crude. Other states with high average gravities are Michigan, 44.0 degrees; New York, 43.5 degrees; West Virginia, 43.3 degrees, and Pennsylvania, 42.0 degrees. However, the combined output of these states was not large and had little effect on the average gravity for the country. The lowest gravity crude reported was that at Casmalia, Santa Barbara County, California. This crude has a gravity of 6.8 degrees A.P.I., or 1.023 specific gravity, which indicates that it is heavier than water. Other low gravity crudes are produced at Kern River, California, 14.1 degrees, and Irma, Arkansas, 14.4 degrees. The state of Texas, with the largest number of fields, had a varied assortment of gravities, with a range from below 20 degrees to above 40 degrees. The average for the state was 32.4 degrees, or practically the same as the national average.

Gasoline Percentage

Gasoline percentage recoveries for 78 samples of crude oil examined in the course of the survey are given in Information Circular 6114, recently published by the Bureau of Mines. The production of the fields represented by the 78 samples was the equivalent of 29.4 per cent of the total production. If the gravity of each of these crudes is weighted on the basis of their production, the average gravity for all the samples works out to be 30.4 degrees. If the per cent of gasoline in each sample is weighted in the same manner, the average gasoline content works out as 23.4 per cent. Since the average weighted gravity of the 78 samples is not far from the average for the entire country, it is probable that this computed figure of 23.4 per cent for gasoline content is close to the actual gasoline yield obtained in skimming operations. As a matter of fact, the yield of gasoline in 1927 (natural gasoline deducted) by straightrun methods was 24 per cent of the total crude run.

Although, in general, the higher the gravity, the higher the gasoline yield, no definite rule can be laid down as to the increment to be expected in gasoline percentage recovery for each degree rise in gravity. This is because of differences in chemical composition which, in addition to affecting gasoline recovery by means of its relation to gravity, also exerts an effect which is distinct from gravity. For example, a crude of 30 degrees may contain a higher percentage of gasoline than one of 35 degrees. Another, and perhaps a better way of estimating the probable increase in gasoline recovery for a 1 degree rise in gravity, would be through a study of the differential for each degree gravity posted by the major crude buyers over a long period of time. The gravity basis as now used by the crude buyers in most fields is an attempt to make allowance for the higher gasoline content of high gravity crudes, and over a period of time the price differential for each degree of gravity would be a rough measure of the increased percentage of gasoline that might be expected.

Sulphur Content

The rapid increase in production of the West Texas fields has focused attention on the sulphur content of crudes as an item of great importance, because most West Texas crudes are relatively high in sulphur compounds, making them difficult to refine and very corrosive to equipment. The 78 samples of crude selected for this study had a weighted average sulphur content of 1.16 per cent as compared with a weighted average of 1.90 per cent for West Texas. The highest per cent of sulphur for any of the samples was 4.13, reported for the Cat Canyon Field of Santa Barbara County, California; the lowest was 0.08 per cent, for Greybull Field of Big Horn County, Wyoming. Most of the Mid-Continent crudes are low in sulphur, the average being in the neighborhood of 0.25 per cent.

On the basis of composition or "base," there are three common types of crude, namely, paraffin base crudes, asphalt or naphthene base crudes, and crudes of a mixed or intermediate base.

WEATHER HOLDS BACK GASOLINE CONSUMPTION

(Continued from Page 28)

One Oklahoma company has boosted its price on steam refined stock (filtered) to 18 cents with sales as high as 20 cents. A few weeks ago this same stock was selling at 11 and 12 cents. Unfiltered stocks are bringing from 10 to 15 cents a gallon at other refineries. The low on bright stocks is now 32 cents with a price range up to 39 cents.

May Affect Gasolines

It has been pointed out in the trade that these prices on lubricating oils may have an indirect bearing on the gasoline market situation over the remainder of the year. The higher prices for neutrals and cylinder stocks naturally has meant higher costs in the production of finished motor oils. In the Mid-Continent area the cost of compounding since the first of the year has increased from 5 to 15 cents per gallon, the largest increase being in the high viscosity motor oils for which there is the greatest demand.

It is pointed out that it is improbable that the retail price can be advanced in line with the increased cost of production. Outside of the premium grades the jobbing fraternity is accustomed to charge their customers 25 cents a quart for lubricating oils. In the past there has been an adequate profit for the jobber and retailer on this basis. In fact the average jobbing organization has been dependent on its lubricating oil sales for its profit. Gasoline sales are figured on a "break even" or loss basis with the expectation that the wider margin in lubricating oil sales would give an overall profit in the operation of a bulk station or retail station.

If a substantial part of this marketing profit is wiped out it is apparent that the loss will have to be made up with wider margins in gasoline sales. The other alternative is to increase the retail price of lubricating oils at the stations to 30 cents a quart. This has been done by a few companies with well-established brands of motor oils manufactured from Mid-Continent stocks. It is doubtful, however, that such a policy would prove feasible in jobber sales at this time.

Sellers of the nationally advertised lubricating oils coming from Pennsylvania and other paraffin crude oils occupy practically the same position. Their volume in many cases has increased but the refiners have advanced prices to them due to the increased cost of production.

Tend to Stabilize

One refiner has an interesting slant on this development. He takes the position that margins in lubricating oil sales have been too wide. As a result the bulk station and service station operators have not been concerned in the price they received for gasoline. If the tank wagon and service station prices were reduced the operator still figured he could make a profit in his oil sales. With a narrower margin this refiner contends the distributor will watch his gasoline price situation bringing about more stabilized market for that product.

Gasolines and Naphthas

The general spread on U. S. Motor gasoline sales to the trade on Tuesday was 7½ to 7¾ cents. Resale material sold as low as 7⅝ cents and one refinery reported sales to jobbers at 7¾ cents. To relieve storage conditions at small plants considerable material is in transit and unless the demand improves some distress sales will probably develop in the next week.

The higher gravities are not displaying as much price strength as U. S. Motor gasoline. A few scattered sales of 400 endpoint under 8 cents were reported with a price range up to 8½ cents. The low on 375 endpoint material was 8⅛ cents. The 360 endpoint was selling at practically the same prices as 375. The movement of all high gravities was slow.

Kerosenes and Distillates

The most interesting development in the kerosene market was the purchase of 1,250,000 gallons by an independent foreign buyer. This business was placed through brokers with North Texas refiners who, considered as a group, have led in the recent price decline. The export order is said to have brought the sellers 5 cents a gallon.

It is believed that the independent purchase will result in lowering of the export price for kerosene at the Gulf Coast as posted by the Petroleum Export Association, Inc. The price for several weeks has been 7¾ cents for the 41-43 grade. With a price of 5 cents, North Texas, this leaves the buyer an exceptionally wide margin of profit.

The purchase served to stop the price decline in North Texas and to that extent aided the entire Mid-Continent market. The 41-43 water white grade is selling in Oklahoma at 5⅜ to 5⅝ cents with some resale business reported at 5¼ cents.

Distillate prices were again lowered one-eighth cent reflecting a slow jobber demand.

Natural Gasoline

The natural gasoline market is more unsettled than it has been at any time in several months. There are relatively few buyers in the spot market but at the same time most of the manufacturers are not forcing sales as their contract movement takes the greater part of their output.

Opinions vary as to what constitutes the spot market. The Grades AA and A sold on Tuesday at 7¼ cents with sales of Grades B, BB and C reported at 6¾ cents. Prices ranged one-fourth cent above these quotations.

Fuel Oil and Gas Oil

Refiners are having difficulty in securing premium prices for the higher gravity fuel oils. As a result very little material is being offered. Gas oils are lower when sold in competition with West Texas gas oil, several sales of industrial grades at 2¼ cents being reported.

CO-OPERATION IN CONSERVATION URGED AT NATURAL GAS MEETING

By W. A. Jones
Vice President, Henry L. Doherty Co.*

We have many problems confronting us today. Most of them are not new, but our future progress is dependent upon their solution. I shall briefly review some of the most important problems as I see them and leave their solution for your deliberation.

It should be unnecessary at this convention to bring up for discussion the all important problem of the proper design of rate structures. There has been so much written on this subject that it might seem there was little more to say, but the fact remains that, if you examine the methods of charging employed by various public utility companies, glaring inconsistencies are noted and complete lack of uniformity in design and application.

I do not mean to suggest that there should be a uniform price for electricity, gas or any other form of public utility service which would apply in Maine as well as in California any more than I would suggest that the price of a box of oranges in California should be the same as in Maine, or the price of a bushel of wheat should be the same in Kansas as in New York. Local conditions, such as availability of supply, water power, coal and natural gas all play a part in fixing the price of a commodity at a given point.

But, I do feel that it is a source of great embarrassment to the industry and great confusion to the minds of the public that the rate structures of the gas companies of this country are not more uniform or that the methods of charging for service are in some cases so dissimilar that, if applied to other commodities, they would appear as irrational as selling eggs by the dozen in one city, by the yard in another, by the bushel in another, and by the pound in still a fourth.

Ignores Fundamentals

It is a fact that in many cases the rate structure has been designed by a company with the sole idea of discouraging the use of large quantities of gas, ignoring entirely the important fundamental that the future development of our business depends upon selling an increasing amount of our commodity at fair and reasonable rates. In the case just referred to, the gas company designed such a rate with the idea of limiting the amount of gas used by a customer during peak days so that the company could prorate the distribution of the available supply. The step-up block rate installed failed to reduce the demand on peak days when the customer was willing to pay anything for gas but did curtail the sales on the days when the company had plenty of gas to deliver. There was no betterment of service but instead a decided reduction in the earnings possible under a proper form of rate. A real solution of this problem could have been found in the design of a rate which would permit a customer to take any amount of gas he desired at any time, if he were willing to pay the cost of rendering the service at that time.

For many years the straight meter rate of charging for gas service has been the one accepted by both the companies and the public and yet the time has long since passed when competent engineers agreed that this is the most equitable method of charging for service. There is a popular misconception that under this method of charging for service all customers are treated fairly, but this is not the case—in fact, the reverse is true. There is no equity in such methods of charging in the average community. In fact, it introduces the greatest discrimination in the distribution of the cost of service, penalizing the good customer with the losses incurred through serving the convenience users and in the end raising the average price of the commodity to all.

In recent years many of the manufactured gas companies have faced decreased earnings due to the intense competition which they have met from electric and oil companies. Some of the gas companies have been forced through loss of business to seek relief in increased straight meter rates. Such action very often drives off their lines many of their most valuable customers. In one large city in the State of New York the straight meter rate had become so high that the company lost thousands of customers and finally was forced into receivership. The company was purchased by a new management, the old method of charging was abandoned, a service-charge form of rate was installed, the average rate to the customer greatly reduced, the volume of sales per customer practically doubled and the company is now in a prosperous and healthy condition and its customers are satisfied with both the service and the rates.

This is by no means an isolated case, but instances are still much too rare in this industry where scientific, rational and equitable methods of charging are accepted and installed by our companies. We have been far behind the electrical industry in this matter and they have much yet to do in the design of a rate structure.

I am convinced that competition for business between the gas and electric companies will increase in years to come and I am equally certain that, unless we give more attention to the design and promulgation of rational methods of charging for service, we will lose millions of dollars of business which we should properly serve.

Need For Sales Activity

Next only in importance to the proper method of charging for service I would place the need for a most aggressive sales policy. For many years there was a popular misconception in the minds of public utility men that salesmanship in the industry was of no great importance; that the service was so essential the public would seek us out. Most of our members have discarded this idea, but I am sure that none of us is making the most of his sales possibilities.

In many places it has been comparatively easy for natural gas companies to displace solid fuels in industrial plants and coal for water heating and house heating. But, as we look into the future, we cannot help but face the keenest competition in the industrial field in the introduction of high efficiency pulverized coal burning equipment; and, if we are to contend with a continuation of overproduction of oil which has prevailed for some years, we face the possibility of oil companies taking much of the industrial business which the coal companies cannot secure. In the domestic field we face a further invasion of our markets by electric companies, which in some instances have already reduced their rates to the point where they are taking on large amounts of water heating business; and experiments are now under way in two sections of the United States looking to the heating of homes by electricity.

We cannot stand still in the face of such competition and in my opinion only the adoption of the most aggressive sales policy will protect us from great loss in the future. The automobile industry, the radio industry and other similar lines of business have shown a spectacular growth in the last ten years and I believe a close study of their development would show conclusively that much of it has been due to high class salesmanship.

The natural gas industry of the future will need more and better salesmen, who understand the problems of our business and who know how to develop such business as we can economically serve.

Utilization Equipment

During the past few years there has been great improvement in the efficiency of the utilization of gas in all types of appliances and particularly in house heating equipment. In the early history of the gas business there was great loss of gas in its utilization by the customer. The gas was in many instances sold at ridiculously low rates for both domestic and industrial purposes. In some instances in this section of the country contracts for ten years were entered into at as low at 2c per thousand. Of course, gas was not delivered at such rates over any long period of time, for long before the termination of such contracts the companies making them had passed out of existence through financial failure. But, during the period of ridiculously low prices, the customer had no incentive to improve the utilization of gas. The experience of the business has shown that the customer will not pay the price for efficient equipment unless it is a dollars and cents saving to him.

The top burners in the majority of early natural gas rangers were placed so that the burner ports were 3" or more below the bottom of the cooking utensil. The length of the flame varied from 3" upward. Many rangers were equipped with unlined ovens. The common type of water heater was that with a burner under a storage tank and without a jacket around the tank to carry the product of combustion across the heating surface formed by the sides of the tank. In other extreme cases bath water was heated by placing pipe burners directly under the bath tubs.

Furnace burners were as a rule inefficient; in some cases no burners were used, but an open end pipe was inserted into the firing door and the gas burned in a raw state without primary mixture. In other instances burners were installed so that the product of combustion passed so quickly to the flue that the efficiency of the furnace was extremely low. Examples of inefficient house heating furnaces have been found to require a gas demand of 1,000 cubic feet per hour to heat the house in zero weather, when a proper installation often times in the same furnace would do the same work with a gas demand of 200 cubic feet per hour.

While these conditions prevailed, is it any wonder that many gas companies refused to take on house heating business? It was next to impossible for the companies to render good service because of the extreme demands made upon their lines.

The above references to inefficient appliances apply to conditions which existed in important gas areas as late as 1920. In the past few years great strides have been made in improving efficiency of utilization, both as the result of adjustment and changes in existing appliances and substitution of efficient appliances for obsolete types. The great improvements which have been brought about in range and water heater design is too generally known to require comment.

Improvements in house heating are of more recent origin. There are now available efficient and moderately priced gas furnaces and boilers for residence heating. Where coal designed burners are in good condition and reasonably efficient as such, there are conversion burners available which can be installed at a moderate price and which will give thermal efficiencies closely competing with the efficiencies of gas designed appliances.

Pipe Line Interconnections

In recent years the light and power

*Before annual convention, Natural Gas Department, American Gas Association, Kansas City.

companies of the country have been giving much attention to the interconnection of large transmission systems. In many cases such interconnections have made it possible to reduce the amount of reserve capacity which the participating companies had theretofore been forced to carry to insure service in any given area and in still other cases where large units have temporarily gone out of commission, these interconnections have made possible continuous electric service where such service would have been impossible without interconnection.

Some of these same benefits and advantages can be had through the interconnection of large natural gas systems, each having its own reserve supply for it not infrequently happens that at the time when there is a surplus of gas on one system, there is a shortage on another. In the interests of better service, we can well afford to give this question the most serious study.

Utilization of By-Product Gas

In some sections of the country there are available large quantities of by-product gas contiguous to markets already served with straight natural gas. The efficient utilization of this by-product gas is in the interest of economy and in many cases such gas can be used to assist in carrying peak demands.

The subject of mixing gas of various grades is of the greatest importance, for, if we look far into the future, we will no doubt be confronted with the exhaustion of some of our large natural gas reserves and before these reserves are exhausted, we will be confronted with a dimishing supply of gas. If, at this time, we have found the way to supplement our natural gas resources with manufactured gas, we can at once prolong the useful life of many of our pipe line systems and render the public the greatest service.

The American Gas Association has recently formed a committee to study this problem and work is now going forward in the Cleveland laboratory, but, like many other of our research activities, they will need your continuous support in the future.

Greater Conservation of Gas

There is an old adage which reads: "Wilful waste brings woeful want." If these be prophetic, the gas industry and the public will some day, and perhaps much sooner than most of us here are willing to concede, face a great famine, for we have been in the past and still are most profligate in the use of natural gas, and still more profligate in the methods employed in its production.

The American Gas Association is now devoting much attention to the improvement of utilization equipment and most of the large companies are trying to discourage the sale of inefficient gas equipment, for they realize the sale of such equipment means dissatisfied and unprofitable customers. Inefficient appliances make a cubic foot of gas less valuable to the customer—to make the result cost the same the gas must be cheaper. As a matter of fact, it makes service more expensive, because the property must be written off faster.

Too little attention, however, is being given to the more important problem of stopping the enormous waste in the production end of our business. These wasteful practices are so numerous I cannot enlarge upon all of them here, and I am sorry to say that many of them are so common that they are often accepted as inevitable.

Perhaps the most common waste of natural gas is that which now goes on in connection with the development of the oil resources of the country. The rapid development of the automobile during the past two decades and the almost universal use of this and other petroleum consuming devices has stimulated the most intense search and scramble for oil. The great fortunes amassed by the early pioneers in the oil industry have drawn many adventurers into this business and the production of petroleum has now reached the point where it greatly exceeds the legitimate use of petroleum. This condition has prevailed for so long that the entire oil industry is in a chaotic condition. In fact, it may be truly said that the oil producers of this country are literally being drowned in oil.

Results of Present Conditions

The results which followed closely upon such a condition are those which might logically be expected to follow a complete disregard of those economic laws which govern all business and might be listed as follows:

1. Rapid dissipation of our great oil resources.
2. Ruthless competition in marketing and untold duplication of investment in this branch of the industry.
3. Excessive drilling; or in many cases town lot drilling, where in some instances ten wells are drilled for each one that is necessary.
4. Diminishing profits and in many cases great loss to stockholders of oil companies.
5. General impairment of credit of oil companies because of the lack of confidence of investors in the future of the business.

You may ask what all this list of troubles of the oil companies has to do with the natural gas business. The answer is to be found in the fact that our business is so closely related to the oil business that the wastes in that industry affect us directly. In fact, I think perhaps the greatest economic waste in the oil business has been through the dissipation of our great natural gas resources.

Last year there were approximately 22,000 wells drilled in this country in the search of oil. Of this number over one-half produced gas in varying quantities and in untold instances much of this gas was blown in the air and all or a part of it wasted, or used very uneconomically. Competent engineers have estimated that in the Mid-Continent field alone there has been wasted in the last ten years a sufficient amount of gas to take care of the present household requirements of this section of the country for perhaps fifty years. The waste has been so serious in this section of the country that large pipe line companies have been forced to continuously extend their lines farther and farther away from their markets in order to secure adequate supplies to take care of their business, and gas is now being piped into Kansas City and St. Joseph from the great Panhandle field of Texas, 500 miles away, while under proper conservation methods gas might have been produced in areas contiguous to this section for years to come and the great reserves of the Panhandle saved for future generations.

The waste of natural gas however has not been confined to this section of the country alone. Perhaps the waste in the Panhandle has been even more serious.

The Panhandle oil field was first discovered in 1919. Within a few weeks of the drilling in of the discovery well, this section was the scene of intense drilling activity and within comparative few months hundreds of wells were bored, many of which produced large quantities of gas. Most of the drillers here were not interested in the production of gas and there was no ready market contiguous to the field to absorb the large quantities of gas produced. As a result, the drillers in many instances allowed the wells to blow in the air, hoping that by such procedure they might blow in oil wells. It is estimated that at one time there was as much as seven hundred fifty million cubic feet per day of very valuable natural gas being blown into the air and it is conservatively estimated that since the bringing in of the Panhandle field there has been wasted in this field alone enough gas to take care of the normal requirements of this section of the country for 75 years.

In using the word "waste" in this discussion, I have used it in its broadest sense, for in my opinion the improper use of or dissipation of any valuable natural resource is wasteful.

No Adequate Legal Provisions

In pointing out the wasteful practices above, I do not mean to level a general indictment against all petroleum producers, for they are not solely to blame for this condition. As most of us know, the constitutions and laws, both Federal and State, are for the most part designed and drawn for the protection of life and property. When most of the constitutions were written and the laws enacted, little or nothing was known about the science of the production of petroleum or natural gas. When the first Drake well was drilled in 1859 and for a long time thereafter, most people believed that, when an oil pool was discovered, it meant that an underground stream of petroleum had been tapped. Only in comparatively recent years have we applied the science of geology to the locating of oil and gas reserves and the production of them, and learned by careful study under what conditions oil and gas exist in their natural state. It is not strange therefore that the law, both Federal and State, do not make adequate provision for the proper conservation of our oil and gas resources.

As you know, the law of capture applies to our business. This same law applies to only two other kinds of property, wild birds and game, and fish. The application of this law to our business is manifestly unfair, and the time has come now when a knowledge of this business would permit the design of more equitable legislation, properly protecting our rights. The time has come when most prominent oil and gas technicians realize that oil and gas pools should be developed as units.

In some sections of the country attempts have been made to secure cooperative agreements of operators, but this method has proved impracticable. Those of us who are active in the production end of the business know how difficult it is to get 100, 50, 25 or even 10 land owners to agree to any fixed program with respect to the development of their lands. In other sections attempts have been made to secure the cooperation of state regulatory commissions. This method has proved ineffective, for it has been demonstrated that such commissions have no authority to exercise complete control and, even if they had, the control or conservation of petroleum or gas in one section would insure no control whatsoever in other oil and gas producing areas, and a general conservation plan could not be enforced by a single state committee.

Realizing at the beginning the difficulties incident to the passage of uniform state conservation laws adequately covering our production problems and, further realizing that the waste of our national resources might in years to come put this country at a great disadvantage in the event of war, Mr. Henry L. Doherty advocated action by the Federal Government to the end that our oil and gas resources might be conserved. In all the years that have elapsed there have been no other plans advanced which would adequately take care of this problem, and yet there has been reluctancy on the part of the oil industry to endorse his plans. In the meantime millions of dollars in natural gas has been wasted and bills are still being piled up which future generations must pay in higher prices for petroleum and natural gas, and partial substitute. No substitute is as good as petroleum or natural gas and any of them cost much more.

I have dwelt at length on the question of the proper conservation of oil and gas, for in my opinion this is the most important problem which confronts the natural gas industry. Every natural gas producer, every natural gas pipe line op-

erator, and every natural gas distributor should be vitally interested in the greatest conservation and proper use of our commodity. I am certain that the public generally is taking increased interest in this subject, for it realizes that ultimately it will pay the bill for waste in higher prices for gas and oil for future years.

We know that our reserves of natural gas are not inexhaustible. The dissipation of each field carries with it millions of dollars of investment and new investments are necessary continuously to take care of our business. With the wasteful methods employed in the production of oil and gas, we must carefully consider the wisdom of pouring additional millions of dollars into our business if we have in mind ultimately making good with our stockholders and investors.

This convention could take no more important action in my opinion than to create a strong committee to cooperate with the oil industry in bringing about in the quickest possible time the adoption of sane conservation measures which will permit our business to be conducted at a profit and, of more importance, to insure that our tremendous, valuable resources of gas and oil are not quickly dissipated.

WEST TEXAS FIELDS

(Continued from Page 40)

made contract with the Wickett Refining Co., and the San Angelo Refining Co. for all of their production, and will build a 4-inch screw line from their wells to the Texas & Pacific Railroad at Wickett, a distance of about 15 miles. Three producing wells are owned by the J. H. L. Oil Co. and Mr. Shipley, a daily production, at present, of about 350 bbls.

Deepest Well's Gas Peak

Group No. 1 Oil Corp.'s (Texon Oil & Land Co.) No. 1-B University, Reagan County, averaged 2,504 bbls. daily for the week, an increase of 98 bbls. daily over the preceding week. Setting a new gas peak was the feature of the well this week, gauging 43,000 feet more than its previous peak, or a gauge of 23,716,000. The daily average of gas during the week showed an increase of 301,286 feet daily. On May 8 it equaled its past high peak of May 3, producing 2,532½ bbls.

Grayburg Oil Co.'s No. 3 Pecos River Bed was plugged back 3 feet from total depth of 936 feet. This well had been making water only. It now fills up about 300 feet overnight, 50 per cent water and 50 per cent oil from pay at 886 feet. It will be plugged and abandoned.

WEST TEXAS COMPLETIONS

Brewster County

Williams' No. 1 Poncey, 459 feet from south and 1,062 feet from east of Section 26, Block 214, was dry and abandoned at 515 feet.

Borden County

Hyde and others' No. 1 Beal, 1,320 feet from north and east corner of Section 14, Block 31, Township 3n, topped the salt at 1,105 feet, topped the lime at 2,752 feet and was dry and abandoned at 3,540 feet.

Gaines County

Pure Oil Co.'s No. 1 Williamson, 1,650 feet south and 330 feet west of NE cor., Section 110, Block H, D.&W.R.R. Survey, was dry and abandoned at 4,124 feet.

Howard County

American Maracaibo Co.'s No. 1 Settles-D, located 330 feet from north and 1,650 feet from west of Section 158, Block 29, topped the pay at 2,928 feet and was drilled to a total depth of 2,934 feet and had an initial production of 578 bbls. Cosden & Co.'s No. 4 Roberts-C, located 330 feet from north and 1,650 feet from west of Section 128, Block 29, topped the pay at 1,274 feet, was drilled to a total depth of 1,311 feet and had an initial production of 30 bbls. California Co.'s No. 1 Settles, 2,310 feet from SE cor., Section 158, Block 29, was dry and abandoned at 3,417 feet.

Jones County

Sedgwick Oil & Gas Co.'s No. 1 Routh, 1,250 feet north and 2,500 feet west, southeast corner Austin & Williams Survey, was dry and abandoned at 3,267 feet. The Texas Company's No. 6 Carter, 200 feet south and west of northeast corner L Carter 173.5-acre tract, Section 13, Block 19, T.&P.R.R. Survey, made 18 bbls. oil and 30 bbls. water on pump at 2,740-43 feet.

Irion County

Fuhrman Petroleum Co.'s No. 1 Suggs, Lease No. 2, C SW, Section 3,029, Block 24, was dry and abandoned at 2,450 feet.

Menard County

J. C. Barnett's No. 1 Collins, located 330 feet from south and east of Section 22, was dry and abandoned at 2,217 feet.

Pecos County

Mid-Kansas Oil & Gas Co.'s No. 26 Yates, Section 34½, Block 194, had an initial production of 3,450 bbls. at 1,400-65 feet.

Runnells County

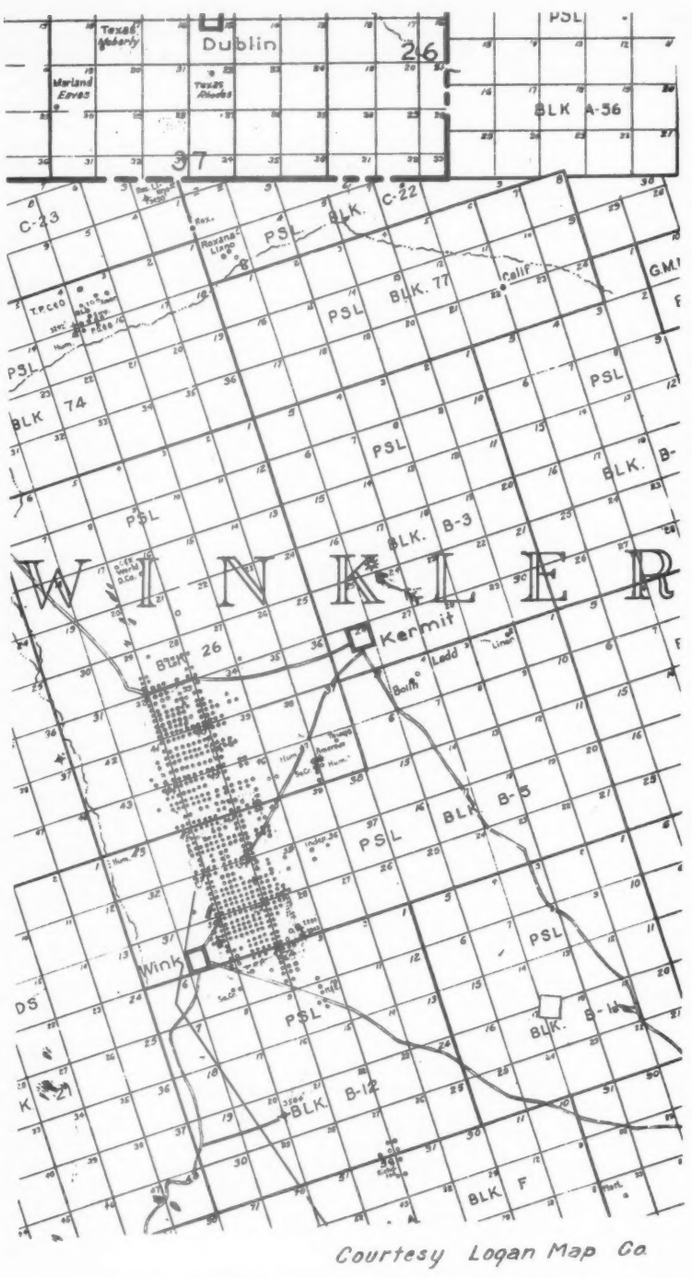
Pure Oil Co.'s No. 1 Giesecke, was dry and abandoned at 1,421 feet. Its No. 2 Giesecke was dry and abandoned at 1,554 feet. Union Oil Co. of Nevada's No. 1 Allen was dry and abandoned at 3,874 feet.

Upton County

Sun Oil Co.'s No. 1 Long, 2,310 feet from SW cor., Section 3, was dry and abandoned at 2,216 feet.

Winkler County

Barnsdall Oil Co.'s No. 2 Morton, 1,650 feet south and 330 feet west of Section 26, Block B-12, was dry and abandoned at 3,124 feet.



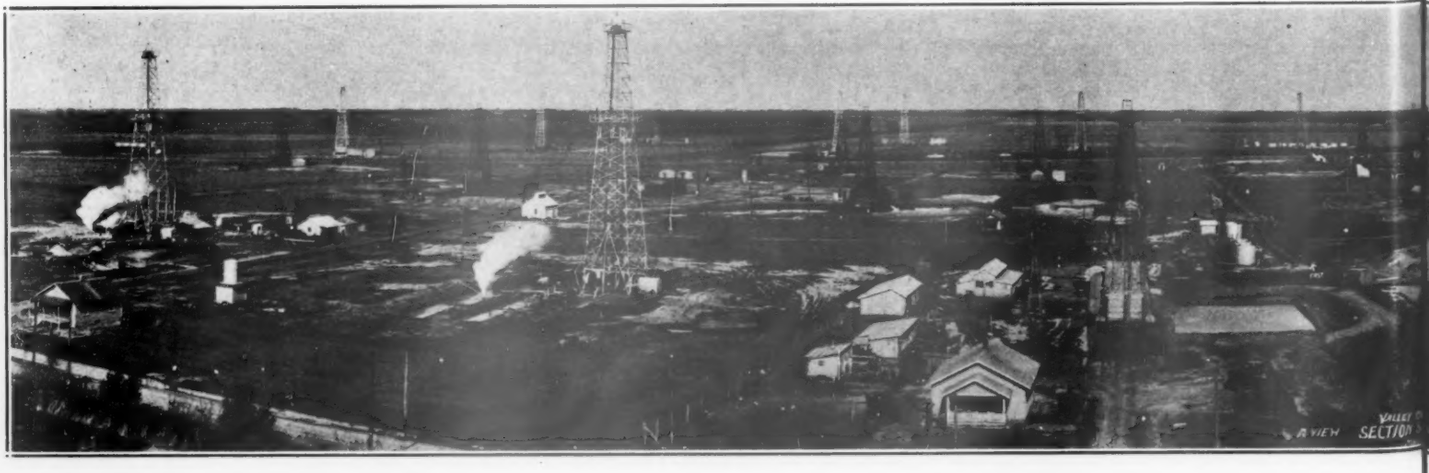
Map showing relation of Bashara's No. 1 fee, with Hendricks, Scarborough and Leck Pools in Winkler County. This well is temporarily completed as a gasser at total depth of 2,481 feet. Gas gauged 19,430,000 feet.

PIPE LINE RUNS
April 24 to May 1

Runs Through Trunk Lines

	Last period
Atlantic P. L. Co., Port Arthur, Tex.	38,000
Gulf Prod. Co., to Coast via Ranger,	

A VIEW OF THE VALLEY CENTER FIELD IN KANSAS, SHOWING SE N 6.



Tex.	24,401
Humble P. L. Co., via Comyn, Tex.	47,165
Humble P. L. Co., via Ingleside, Tex.	51,204
Illinois P. L. Co., to Del R'o, Tex.	37,000
Magnolia Pet. Co. to De Leon, Tex.	30,486
Pasotex P. L. Co., El Paso, Tex.	9,240
Shell P. L. Co., Healdton, Okla.	10,977
Total	278,413

Tank Car Shipments

Orient, McCamey, Tex.	145
The Texas Company, Crossett, Tex.	294
American Pet. Co., Pyote, Tex.	12,430
Southern Crude O. P. Co., Wickett, Tex.	14,715
Skelly Oil Co., Pecos, Tex.	4,178
Total	31,762

Runs to West Texas Refineries

Amarillo Prod. Co., Pyote, Tex.	2,676
Bluebonnett Ref. Co., Wickett, Tex.	1,202
Burford Ref. Co., Pecos, Tex.	4,751
Col-Tex Ref. Co., Colorado, Tex.	6,509
Cosden Ref. Co., Big Spring, Tex.	9,771
Great Western Ref. Co., Big Spring, Tex.	1,805
Humble Oil & Ref. Co., McCamey, Tex.	10,256
Midland Ref. Co., Midland, Tex.	2,722
Tonkawa Ref. Co., Pyote, Tex.	1,470
Valley Ref. Co., Pyote, Tex.	6,953
Big Spring Ref. Co., Big Spring, Tex.	2,600
Total	53,646

Summary

	Previous week	Last period
Pipe line runs through trunk lines	277,247	278,413
Tank car shipments	33,368	31,762
Runs to West Texas refineries	48,950	53,646
Total daily distribution	359,565	363,821
Total daily production	352,508	354,199
Daily average from storage	7,057	9,622

DAILY AVERAGE PRODUCTION BY LEASES WINKLER COUNTY
Week ending May 7
HENDRICKS POOL

Company, farm, sec., blk.	Wells	Prod.
Amerada Pet. Corp.:		
Cowden, 3, B-12	3	871
Atlantic O. P. Co.:		
Hendricks-A, 34, B-5	7	1,384
Hendricks-B, 44, 26	5	737
Hendricks-D, 29, B-5	8	2,078
Hendricks-E, 41, B-5	7	2,399
Hendricks-G, 46, 26	7	648
Hendricks-H, 30, B-5	1	20
Atlantic and Collett:		
Hendricks-F, 40, 26	13	1,494
Bankers Prod. Co.:		
Hendricks, 30, B-5	1	56
California Co.:		
Hendricks, 29, B-5	8	1,040
Cranfill & Reynolds:		
Hendricks-A, 28, B-5	2	174
Hendricks-B, 35, B-5	1	79
Hendricks-C, 33, 26	2	187
Hendricks-E, 33, 26	2	373
Cranfill and Texon:		
Hutchings, 47, 26	1	82
Culberson Bros.:		
Hendricks, 40, B-5	1	90
Eastland Oil Co.:		
Hendricks, 35, B-5	2	609
Hendricks-B, 35, B-5	1	269
Gulf Prod. Co.:		
Hendricks-A, 34, B-5	13	4,010
Hendricks-B, 45, 26	11	9,306
Hendricks-C, 40, B-5	6	2,174
Hendricks, 44, 26	2	677
Cowden, 3, B-12	3	1,885
Humble Oil & Ref. Co.:		
Hendricks-A, 34, B-5	17	5,278
Hendricks-B, 29, B-5	6	1,086
Hendricks-C, 32, 26	8	780
Hendricks-E, 47, 26	7	833
Hendricks-C, 10, B-12	9	1,612
Independent Oil & Gas:		
Hendricks-A, 34, B-5	8	1,163
Howe-B, 44, 26	3	444
McCabe, 36, B-5	2	283
Hendricks, 42, B-5	1	12
Company, farm—	Wells	Prod.
Vardeman-B, 41, B-5	7	776
Magnolia Pet. Co.:		
Hendricks, 29, B-5	8	643
Marland Oil Co.:		
Hendricks, 33, 26	4	889
Hendricks, 29, 26	2	177
Hendricks-B, 34, 26	2	294
May Prod. Co.:		
Hendricks, 34, 26	1	10
American Maracaibo:		
Hendricks-A, 28, B-5	1	37
Hendricks-B, 28, B-5	1	155
Mining & Engineering:		
Hendricks, 10, B-22	1	12
Murchison & Cranfill:		
Hendricks-A, 35, B-5	3	582
Hendricks-B, 35, B-5	3	260
Hendricks-C, 35, B-5	1	6
Hendricks-H, 35, 26	1	1,612
Hendricks-I, 47, 26	2	605
Prairie Oil & Gas Co.:		
Hendricks, 40, 26	6	1,432
Cowden, 3, B-12	6	3,770
Pure Oil Co.:		
Hendricks-A, 41, B-5	11	1,822
Hendricks-B, 34, B-5	13	4,949
Hendricks-C, 45, 26	14	8,304
Hendricks-D, 44, 26	1	226
Republic Prod. Co.:		
Hendricks-A, 45, 26	13	1,869
Hendricks-B, 41, B-5	5	276
Shell Pet. Corp.:		
Hendricks-A, 45, 26	6	1,229
Hendricks-B, 29, B-5	6	1,020
Hendricks-C, 29, B-5	8	1,212
Hendricks-D, 41, B-5	6	483
Hendricks-E, 49, B-5	3	770
Hendricks-F, 46, 26	8	1,888
Hendricks-G, 39, 26	1	....
Shell-The Texas Company:		
Cowden-A, 3, B-12	6	1,267
Hendricks, 45, 26	6	1,559
Hendricks-A, 29, B-5	11	2,796
Hendricks-B, 40, 26	6	770
Hendricks-C, 40, 26	6	1,824
Hendricks-D, 40, 26	6	662
Hendricks-E, 39, 26	1	515
Skelly Oil Co.:		
Hendricks, 40, 26	12	6,940
Hendricks-B, 39, 26	2	35
Hendricks-C, 39, 26	1	485
Southern Crude Oil Purch. Co.:		
T-67 Hendricks-A, 42, B-5	3	175
T-67 Hendricks-3-A, 4, B-12	5	411
T-67 Hendricks-B, 44, 26	5	702
T-67 Hendricks-3-A, 33, 26	5	176
T-67 Hendricks-C, 33, B-5	5	637
T-67 Hendricks-2-D, 28, 26	1	65
T-67 Hendricks-E, 42, B-5	1	139
T-67 Hendricks-F, 33, B-5	1	614
T-68 Hendricks-3-A, 35, B-5	5	200
T-68 Hendricks-B, 46, 26	2	279
T-88 Hendricks-A, 44, 26	6	815
T-88 Hendricks-B, 4, B-12	1	776
T-88 Hendricks-C, 29, B-5	7	811
T-88 Hendricks-D, 4, B-12	6	2,506
T-88 Hendricks-H, 28, B-5	6	1,618
T-88 Hendricks-I, 30, B-5	7	1,258
T-88 Hendricks-J, 30, B-5	5	883
T-88 Hendricks-K, 41, 26	5	975
T-88 Hendricks-L, 4, B-12	4	905
T-88 Hendricks-M, 33, 26	30	12,619
T-88 Hendricks-N, 28, 26	5	1,221
T-88 Hendricks-O, 28, 26	2	680
T-88 Hendricks-P, 28, 26	1	186
T-88 Hendricks-Q, 27, 26	2	751
T-88 Hendricks-R, 27, 26	2	749
T-88 Hendricks-S, 34, 26	4	1,263
T-88 Hendricks-T, 34, 26	1	302
T-88 Hendricks-U, 41, 26	7	1,202
T-88 Hendricks-V, 29, 26	1	93
T-88 Hendricks-W, 5, B-12	1	273
T-88 Hendricks-CX, 21, 26	1	527
T-89 Hendricks-A, 35, B-5	3	195
T-89 Hendricks-B, 35, B-5	2	635
T-89 Hendricks-C, 35, B-5	3	615
T-89 Hendricks-D, 35, B-5	1	240
T-89 Hendricks-E, 40, B-5	3	198
T-89 Hendricks-F, 40, B-5	2	308
T-89 Hendricks-H, 46, 26	2	372
T-89 Hendricks-I, 10, B-12	2	340
T-89 Hendricks-J, 9, B-12	5	2,267
T-90 Hutchings, 47, 26	1	310
Texon Oil & Land Co.:		
Hendricks-A, 41, B-5	6	641
Hendricks-B, 45, B-5	6	1,356
Winkler O. P. Co.:		
Hendricks, 33, 26	1	49
Grand total Hendricks Pool	564	139,463

LECK AREA

Atlantic-Kesslar & Logan:		
Leck, 3, 74	2	568
Amerada Pet. Corp.:		
Leck 3, 74	2	665
Empire G. & F. Co.:		
Daugherty, 3, 74	3	679
Magnolia Pet. Corp.:		
Scarborough, 1, C-22	1	176
Gulf Prod. Co.:		
Scarborough, 1, C-22	1	76
Shell-Llano Oil Co.:		
Scarborough, 1, C-22	3	182
Shell-Danciger:		
Leck, 3, 74	2	245
Skelly Oil Co.:		
Leck, 3, 74	1	341
Prairie Oil & Gas Co.:		
Leck, 3, 74	1	264
Daugherty, 3, 74	1	352
Scarborough 1, C-22	1	132
Warner-Quinlan:		
Leck 3, 74	1	396
Total Leck Pool	19	4,078

O'BRIEN POOL

Marland Oil Co.:		
Morton, 10, B-12	2	281
Wentz Oil Corp.:		
Morton, 10, B-12	1	250
Simms Oil Co.:		
Sealy, 50, 5	1	25
Richardson et al:		
Stockton, 50, F	1	164
Grand total O'Brien Pool	5	720
Grand total Winkler Pool	588	144,259
Last week		144,131
Gain		128

PECOS COUNTY
YATES POOL
Week ending May 7, 1929

California Co.:		
Smith, Lease 1	18	6,854
Smith, Lease 1, Sec. 27	3	426
Smith, Lease 1, Sec. 23	7	1,211
Smith, Lease 1, Sec. 21	3	925
Smith, Lease 2	2	167
Smith, Lease 3	12	1,701
Tippett, Lease 1	1	37
Cosby Drilling Co.:		
Smith	1	250
Gulf Prod. Co.:		
All leases	36	11,570
Humble O. & R. Co.:		
Smith-A	10	1,425
Smith-B	5	775
Kirby Pet. Co.:		
Tippett	2	60
Kirby Pet. and Edson:		
Tippett	1	200
Marland Oil Co.:		
Yates-A	8	657
Yates-A-S	5	1,826
Matador Oil Co.:		
Smith	2	508
Mazda & Savoy:		
Smith	3	661
McCarty Oil Co.:		
Gray	1	.....
McMan Oil & Gas Co.:		
Smith-A	1	1,129
Smith-B	4	1,062
Smith-C	5	796
Tippett	2	265
Richardson	1	98
McMan and Marland:		
Yates	17	4,496
Mid-Kansas and Transcontinental:		
Yates-A	23	12,133
Yates-B	27	5,628
Yates-C	11	5,765
Yates-D	6	6,494
Yates-E	1	92
Yates-F	4	648
Yates-G	4	944
Yates-H	8	5,222
Smith	4	1,324
Smith	18	2,499
Yates-C-3	1	250
Grayburg Oil Co.:		
Pecos River Bed	7	750
Seepage	..	1,260
Pecos Valley Oil Co.:		
Fee Sec. 22, Blk. 26	2	76
Phillips Pet. Co.:		
Monroe	1	66
Ramsey	1	201
Red Bank Oil Co.:		
Smith	5	609
Shell Pet. Co.:		
Tippett	11	2,069
Smith	9	936
Smith-B	1	627
Smith-D	3	417
Smith-E	1	19
Simms Oil Co.:		
Smith	7	1,957
Skelly Oil Co.:		
Tippett	1	90
Total Yates Pool	306	90,066

DEEP TESTS IN NEW YORK

BUFFALO, N. Y., May 11.—The Holley-Albion Petroleum Corp. was organized at Holley recently to test out leases owned by the corporation in Orleans County, about 50 miles northeast of this city. A standard derrick has been erected near Albion over an old well that was temporarily abandoned in the Trenton rock. This well will be deepened in the hope of finding gas in paying quantity. Another similar well 6 miles distant will also be deepened. One of these wells showed gas in the Trenton, but not in paying quantity.

NEW BOOK ON COMPOUNDS

The Pyrolysis of Carbon Compounds is the title of an extended treatise on the transformation of the compounds of carbon into other compounds through the agency of heat. This book of 807 pages is by Charles Dewitt Hurd and has just appeared from the press of The Chemical Catalog Co., 419 Fourth Avenue, New York City, as an American Chemical Society monograph. The entire book is full of information which is of value to the petroleum chemist and the chapter starting at page 109 under the title "Petroleum" is especially interesting. Undoubtedly the petroleum industry with its cracking processes ranks as the greatest organic chemical industry.

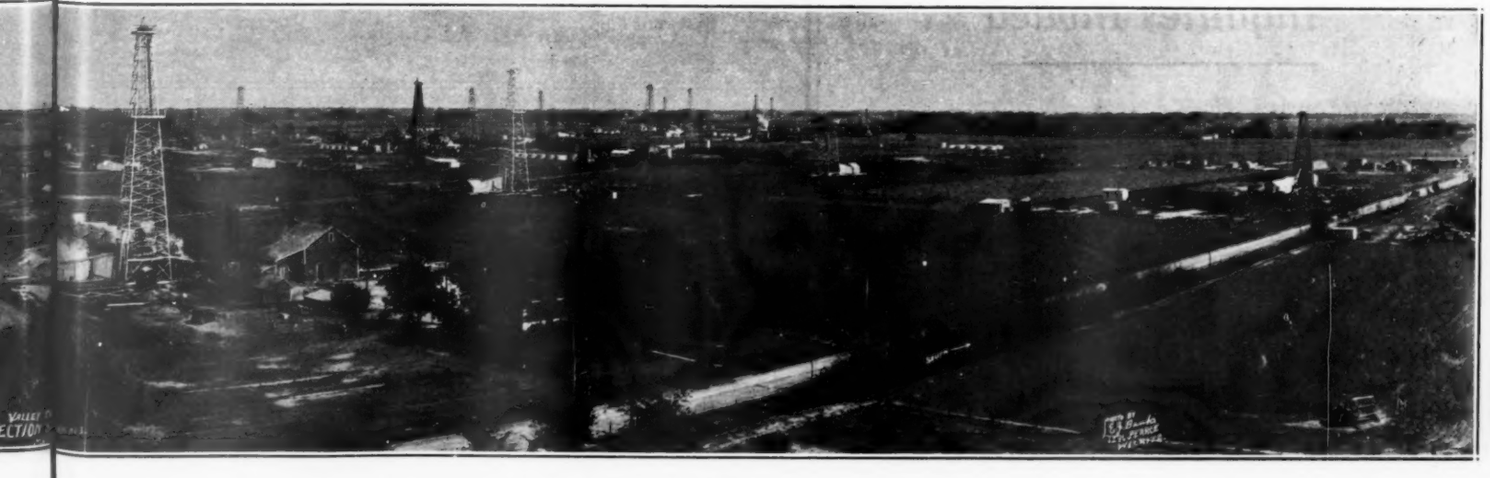
HUMBLE'S SHIPMENTS

SAN ANTONIO, Tex., May 13.—Humble Oil & Refining Co. shipped 2,635,858 bbls. of crude oil from its Harbor Island docks at Port Aransas during April, the company's biggest month from either the Ingleside or Harbor Island docks and bigger than any month of the combined shipments from the two docks. Humble also made a world's record by loading 534,039 bbls. in 34 hours and 20 minutes not taking time out for shifting out the loaded vessels and shifting in the empty ones.

HYDROGENATING PLANT

Germany's first plant hydrogenating black coal for yield of synthetic gasoline will start operation in June.

SEE N 6. THE PICTURE WAS TAKEN FROM NO. 3 CORR IN THIS SECTION



UPWARD TREND IN GASOLINE TAXES FEATURE CHANGES IN RETAIL PRICES

Comparatively few changes were made in the gasoline tank wagon prices throughout the United States during April, as shown by The Oil and Gas Journal's 50 cities report. The average of the net tank wagon prices in these cities was 14.96 cents on May 1, compared with 14.90 cents on April 1. Those changes made during April were scattered and the trend of these changes was determined by the local conditions rather than any general influence.

Compared to a year ago, the average on May 1 of this year was just .06 cent lower. Compared to the average two years ago, it is .36 cent higher. The trend of prices over the immediate future appears to be definitely upward, due principally to the gradual improvement in the refinery market but many contend there will be no general material advance in the retail market until consumption is increased and greater assurance established that the present stocks of gasoline and the present high rate of production will be absorbed during the coming months.

The average gasoline tax showed another advance as the tax was increased from 3 to 4 cents in Ohio on April 18 and New York added to the list, by the adoption of a 2-cent tax there on May 1. This leaves only Illinois without a state gasoline tax and raises the average state tax in the 50 cities to 3.29 cents. The Illinois legislature has passed a law providing for a 2-cent tax which will become effective later in the summer.

AVERAGE TANK WAGON PRICES IN 50 CITIES

(Exclusive of Tax)

May 1, 1927	15.320
June 1	14.720
July 1	14.86
August 1	14.89
September 1	14.62
October 1	14.39
November 1	14.32
December 1	14.21
January 1, 1928	14.29
February 1	14.33
March 1	14.71
April 1	14.81
May 1	15.02
June 1	15.22
July 1	15.29
August 1	15.74
September 1	16.04
October 1	16.34
November 1	16.28
December 1	15.98
January 1, 1929	16.00
February 1	15.11
March 1	14.73
April 1	14.90
May 1	14.96

GULF COAST MARKET

HOUSTON, Tex., May 14.—Gulf Coast refinery markets at the opening of the week apparently were only marking time. Neutral oils indicated no definite trend with prices only steady. The demand continued only fair but also there seemed to be ample business to prevent any further weakening. Fuel oils continued firm in price with very little material available at low prices. Larger sellers were open to offers in some cases as low as 75 cents in cargo lots but that figure still continued absolute bottom. The stronger West Texas crude market Tuesday was proving a bullish factor in the fuel situation and some sellers were getting 80 and 85 cents for this product. Gasolines also were firm on the ship channel and gas oils were strong.

GASOLINE PRICES EFFECTIVE MAY 1, 1929

Table showing gasoline tank wagon prices as of May 1, 1929, exclusive of taxes, in 50 representative cities, including the amount and the date of changes since April 1, 1929. High and low prices and state taxes also given.

	April 1	Price changes April			May 1	High and Low 1928		High and Low 1927		Tax May 1 1928
Birmingham, Ala.	14.0				14.0	18.0	14.0	18.0	14.0	5.0
Phoenix, Ariz.	14.0				14.0	18.0	14.0	19.0	16.0	4.0
Little Rock, Ark.	12.0	30 13.0			13.0	16.0	11.0	15.0	11.0	5.0
San Francisco, Calif.	16.0				16.0	14.0	14.0	14.0	9.0	3.0
Denver, Colo.	11.0	15 15.0			15.0	16.0	13.0	18.0	13.0	3.0
Hartford, Conn.	16.0				16.0	18.0	16.0	22.0	18.0	2.0
Dover, Del.	15.0	11 16.0			16.0	18.0	16.0	19.0	16.0	3.0
Jacksonville, Fla.	17.0				17.0	18.0	13.0	16.0	10.0	5.0
Atlanta, Ga.	17.0				17.0	18.0	13.0	18.0	10.0	4.0
Boise, Idaho	19.5				19.5	20.5	19.5	22.5	19.5	4.0
Peoria, Ill.	14.2				14.2	15.2	9.0	18.2	9.0	...
Chicago, Ill.	14.0				14.0	15.0	14.0	17.0	14.0	...
Indianapolis, Ind.	14.2				14.2	15.2	10.2	18.2	10.2	4.0
Des Moines, Iowa	14.5				14.5	15.5	11.9	16.0	9.9	3.0
Wichita, Kans.	12.8				12.8	13.8	10.8	15.8	10.8	2.0
Louisville, Ky.	15.0				15.0	16.0	13.0	17.0	13.0	5.0
New Orleans, La.	10.5	30 11.5			11.5	14.5	10.5	14.5	11.5	*3.0
Augusta, Me.	16.0				16.0	18.0	17.0	22.0	17.0	4.0
Baltimore, Md.	14.0				14.0	16.0	15.0	19.0	16.0	4.0
Springfield, Mass.	16.0				16.0	18.0	16.0	22.0	12.0	2.0
Detroit, Mich.	14.8				14.8	15.8	11.8	18.8	11.8	3.0
Duluth, Minn.	15.5				15.5	16.5	12.5	19.5	12.5	2.0
Natchez, Miss.	15.5				15.5	16.5	12.5	15.5	12.5	5.0
Kansas City, Mo.	13.9				13.9	14.9	10.9	17.9	10.9	*3.0
Helena, Mont.	19.5				19.5	20.5	19.5	22.0	19.5	5.0
Omaha, Neb.	14.25				14.25	15.25	13.25	14.25	12.25	4.0
Reno, Nev.	20.0				20.0	18.0	18.0	18.0	15.0	4.0
Newark, N. J.	14.0				14.0	16.0	15.0	19.0	16.0	3.0
Albuquerque, N. Mex.	17.0	6 16.0			16.0	17.0	14.0	20.0	16.0	5.0
New York, N. Y.	16.0				16.0	18.0	17.0	22.0	17.0	2.0
Charlotte, N. C.	14.0				14.0	17.0	15.0	19.0	16.0	4.0
Fargo, N. Dak.	16.9				16.9	17.0	12.0	20.0	12.0	2.0
Cleveland, Ohio	14.0				14.0	16.0	14.0	19.0	14.0	4.0
Tulsa, Okla.	14.0	3 12.0			16.0	14.0	10.0	15.0	10.0	3.0
Portland, Ore.	16.5				16.5	14.5	14.5	14.5	11.0	3.0
Philadelphia, Pa.	15.0	11 16.0			16.0	18.0	15.0	19.0	12.0	†3.0
Providence, R. I.	13.0				13.0	19.0	17.0	22.0	17.0	2.0
Charleston, S. C.	14.0				14.0	17.0	15.0	19.0	15.0	6.0
Huron, S. Dak.	15.3				15.3	16.3	14.5	19.5	11.5	4.0
Memphis, Tenn.	13.0	23 11.0			11.0	16.0	12.0	15.0	10.0	3.0
Dallas, Tex.	11.0				11.0	14.0	9.0	13.0	10.0	2.0
Salt Lake City, Utah	17.5				17.5	18.5	16.5	20.5	16.5	3.5
Burlington, Vt.	15.0				15.0	18.0	17.0	22.0	17.0	3.0
Norfolk, Va.	14.0				14.0	16.0	14.0	18.0	16.0	5.0
Washington, D. C.	14.0				14.0	16.0	15.0	19.0	16.0	2.0
Charleston, W. Va.	14.0				14.0	17.0	15.0	18.0	16.0	4.0
Milwaukee, Wis.	14.1				14.1	15.1	13.1	18.1	13.1	2.0
Casper, Wyo.	15.0				15.0	16.0	14.0	18.0	14.0	4.0
Seattle, Wash.	16.5				16.5	14.5	14.5	14.5	11.0	2.0
Minneapolis, Minn.	15.2				15.2	16.2	11.0	15.2	11.1	2.0
Average price	14.90				14.96	16.54	13.54	18.15	13.55	3.29

*State tax 2 cents remainder city tax. †Paid by dealer.

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ACCIDENT PREVENTION CONTEST

A contest on accident prevention to extend from June 1 to September 1 was inaugurated at the recent safety meeting in Shawnee, Okla. Teams of the following companies entered at the meeting, but all safety teams in the oil industry in Oklahoma are invited to take part: Shell Petroleum Corp., Carter Oil Co., Sinclair Oil & Gas Co., Mid-Continent Petroleum Corp., Barnsdall Oil Co., Tidal Oil Co., Skelly Oil Co., Phillips Petroleum Co., Turman Oil Co., Gypsy Oil Co., Empire Oil & Refining Co., Cities Service Co., Continental Oil Co., Amerada Petroleum Corp., Oklahoma Natural Gas Corp., Gulf Pipe Line Co. of Oklahoma, Independent Oil & Gas Co., Superior Oil Co., Mid-Kansas Oil & Gas Co., Atlantic Oil Producing Co. and Shooter Torpedo Co. The producing natural gasoline, pipe line and automotive transportation and equipment branches of the industry will be represented in the contest.

AUTO EXPORTS 21 PER CENT

Taking 21 per cent of the American motor vehicle sales in March, the export markets of the world were the major topic of consideration at the directors' meeting of the National Automobile Chamber of Commerce. Sales of American trucks in other lands during March were 51 per cent of the total output.

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Of Interest to Sales Departments

SMALLER DISTRIBUTORS GAIN IN GASOLINE SALES

Several of the smaller distributors in California have made large gains in their retail marketing during the past year according to reports covering total gasoline sales for the first three months of the year. The report based on gasoline tax collections shows a consumption of 287,770,305 gallons. Of this total the smaller distributors sold 49,671,455 gallons. For the first quarter of 1928 the same class distributors sold 31,105,568 gallons.

The Standard Oil Co. of California continues to be the largest single marketer in the State with approximately 20 per cent of the total. The Shell Co. of California and Richfield Oil Co. are almost tied for second place each selling in excess of 45,000,000 gallons the first quarter of the year. The Richfield company made the largest gain. The following table is the gallonage of the leading distributors in the State:

	First quarter 1929	First quarter 1928
Standard Oil Co. (Cal.)	57,902,624	66,346,823
Shell Co.	45,457,304	43,225,750
Richfield Oil Co.*	45,152,756	36,652,021
Union Oil Co.	29,172,935	34,341,419
Associated Oil Co.	22,885,963	20,051,083
The Texas Company	15,512,505	15,876,532
General Pet. Corp.	15,437,281	8,373,552
Wilshire Oil Co.	6,577,482	5,034,650
Other companies	49,671,455	31,203,738
Total	287,770,305	251,105,568

*Includes Pan American Petroleum Corp.

BEFORE THE SUPREME COURT

CHICAGO, May 11.—The validity of the ordinance passed by the city of Marysville, Kans., which rules that all containers of more than 10 gallons capacity used for the storage of gasoline in that city must be buried is now under fire in the United States Supreme Court where oral arguments were heard on April 19 at Washington. The Circuit Court held the ordinance to be void, but on an appeal to the District Court of Appeals the measure was sustained. An appeal was taken by the Standard Oil Co. of Indiana and other interested oil companies to the United States Supreme Court.

In the arguments for the oil companies the contention was made that the above-ground tanks were in reality as safe as the buried tanks as they could be inspected, policed, repaired and kept safe to the general public. This could not be done with a buried tank. It was also argued that every motorist who had more than 10 gallons of gasoline in his tank violated the law as did all filling tanks with their pumps having visible containers. The case was taken under advisement.

IMPROVE CASE OIL FACILITIES

LOS ANGELES, Calif., May 11.—The Board of Harbor Commissioners on the recommendation of the management is completing plans for bettering loading and storage facilities for case oil in the Los Angeles harbor. The location chosen is at Berth 181, Mormon Island, where the harbor department now maintains a small case oil loading station. Approximately $250,000 will be spent in the improvement.

CANADIAN TARIFF SCHEDULES

CHATHAM, Ontario, May 11.—Application affecting the Canadian petroleum industry will be heard by the Advisory Tariff Commission at Ottawa on May 14. They include an application by F. Baillairgeon ot St. Constant, Quebec, for free listing of white crude scale wax and reduction of duty on paraffin wax, and an application of Imperial Oil, Ltd., for free listing of tetraethyl lead as used in manufacture of gasoline.

HIGHER GASOLINE TAXES OUTDO PROVERBIAL ROLLING SNOWBALL

The Lamp*

The growth of gasoline taxes outdoes the proverbial rolling snowball.

Credit for discovering this rich new field is given to Oregon. In 1919 the State inaugurated what is now one of the largest sources of state revenue by the imposition of a tax of 1 cent per gallon.

Today every state in the Union either is collecting gasoline taxes, or in the case of the last two holdouts, is about to begin such collection. In New York the initial tax of 2 cents per gallon goes into effect May 1. Now there are 10 states and the District of Columbia with a rate of 2 cents per gallon; 16 states with 3 cents; 1 with 3½ cents; 13 with 4 cents; 7 with 5 cents; and 1 with a tax of 6 cents. On top of these taxes a number of municipalities are levying gasoline taxes on their own account.

Of 13 states which had a tax of 2 cents per gallon in 1928, 3 have already moved up to 3 cents and 6 others are considering legislation to increase the rate to 3 or 4 cents.

Of 14 other states which collected 3 cents per gallon in 1928, 1 has a bill pending to reduce the rate to 2 cents. On the other hand, of these states two have already gone to 4 cents, two have legislation pending for a similar increase and four more have bills that would advance the rate to 5 cents. All told there are at this writing 23 states which have enacted or have put in legislation looking to further advances in gasoline taxes.

See how the total rolls up. In 1927 the public paid $259,000,000 to the states with their purchases of gasoline. That happened to be two and one-half times the aggregate net profits of the oil industry in that year. In 1928 the total was $305,233,842 and for the current year indications are that collections will exceed $400,000,000.

This means that in the three years ending December 31 next motorists in the United States will have paid nearly $1,000,000,000 into state treasuries for the privilege of buying gasoline. Last year this item amounted to $15 per automobile in the taxing states. Moreover, in addition to the gasoline tax the owners paid $300,000,000 out in registration and license fees. The result was that in the aggregate they were taxed about $1,000 per mile for all of the surfaced highway in the country.

The gasoline tax offered such an easy way to replenish state coffers that it was inevitable. The oil industry has not opposed the tax where the revenue derived therefrom was devoted to highway construction and maintenance, and where the amount per gallon was within reason. Where the tax revenues were so used both the automobile industry and the gasoline refiner were indirectly benefited by the increased use of automobiles.

The public accepted the tax in the beginning because the amount was small and the need for better roads obvious. It seemed only fair that the automobilist should pay for the new highways he wanted. The tax was paid by the consumer a little at a time so that his burden was not oppressive. It fell for the most part on those who had more than the average amount of income, since they were the class who had the means to buy and operate automobiles.

Furthermore, the public accepted the increases without complaint because the increased payments came in a period when the cost of gasoline was dropping. The combined amounts, the money paid for the gasoline and that paid in taxes did not make a formidable total. Even

(Continued on Page 177)

*Standard Oil Co. of New Jersey.

Who's Who
IN PETROLEUM REFINING AND MARKETING

By C. O. Willson

Third of a series of articles concerned with the major refining and marketing organizations in the United States.

The Standard Oil Co. of California from its beginning has been the major refining and marketing organization of the West Coast and during the past two years it has become a factor in the Mid-Continent industry. The company originally was a subsidiary of the parent Standard company. Since the dissolution in 1911 it has operated a separate unit rounding out all phases of its operations so that it is now a complete unit and one of the largest operating organizations of the industry.

The company operates two of the largest plants of the refining industry at Richmond and El Segunda, Calif. Each of the plants has a crude oil capacity of 100,000 bbls. daily. These refineries are complete in their operations manufacturing all the major products obtainable from California crude oil. In addition the company operates a 25,000-bbl. skimming and asphalt refinery at Bakersfield, Calif. The company's crude runs to stills in 1928 averaged 142,888 bbls. daily.

The plants are supplied with crude oil which the company produces and purchases in California fields. The company's production in 1928 including that scattered in other states totaled 135,196 bbls. daily. The company is the largest natural gasoline manufacturer in California, its production at present totaling approximately 400,000 gallons daily.

The Standard of California is the major distributor of gasoline, kerosene and lubricating oils in the States of California, Oregon, Washington, Nevada and Arizona. These states in 1928, based on gasoline tax reports, consumed 1,403,904,117 gallons of gasoline or approximately 14 per cent of the total for the entire United States.

Seventy per cent of the total demand of these five western states is consumed in California. In that state the first quarter of 1929 the Standard of California sold 57,902,624 gallons or 20 per cent of the demand which totaled 287,770,305 gallons. At the close of 1928 the company was operating 802 bulk stations.

The company's domestic distribution is handled through its own stations and through dealers. The principal domestic grade of gasoline is sold under the Standard trade-mark of "Red Crown." In the operation of its service stations the company has carried out a policy of leasing the stations to operators. This plan of operation has become quite general among the major companies on the West Coast.

In the distribution of its products the company has the advantage of cheap water transportation along the West Coast. To take care of domestic and foreign business the company operates 22 ocean-going vessels and 17 river and harbor boats with a total capacity of 1,579,177 bbls. The company sells its products in Alaska and insular possessions of the United States in the Pacific area. It also has large Asiatic export outlets.

Future Expansion

The recent expansion of the company indicates that in time, through subsidiary companies, the California Standard will become an important factor in marketing outside the West Coast. Last year, the Pasotex Petroleum Co., a 100 per cent owned subsidiary of the company, built a 10,000-bbl. plant at El Paso, Tex. This refinery supplies stations which the company has acquired in West Texas and New Mexico. The company has large crude oil production in the West Texas area sufficient to furnish supplies for additional refinery capacity. The company is interested financially in the Col-Tex Refining Co. which operates a 10,000-bbl. refinery at Colorado, Tex.

LAUNCH TIDE WATER TANKER

NEW YORK, May 11—The motorship "Tide Water," a new tanker to be used in the coastwise service by Tide Water Oil Co. launched last week at the shipyard of the Pusey & Jones Corp. at Wilmington, Del. A party of Tide Water officials journeyed to Wilmington in a special car over the Pennsylvania to attend the launching. The ship was christened by Miss Betty Rouss, a stepdaughter of Edward L. Shea, vice president of the company.

The "Tide Water" is 266.6 feet over all, 44-foot beam, and 15 feet 6 inches draught. Her capacity for carrying gasoline is 20,000 bbls. in the main tanks, together with four lubricating oil tanks, of approximately 55,000 gallons. Her speed will be 10½ knots an hour. She is equipped with Diesel electric engines and can be operated either from the bridge or engine room. Her crew will number 18 men.

The new tanker will engage in the coastwise service, supplying bulk stations at Philadelphia, Providence, Baltimore, and probably Norfolk.

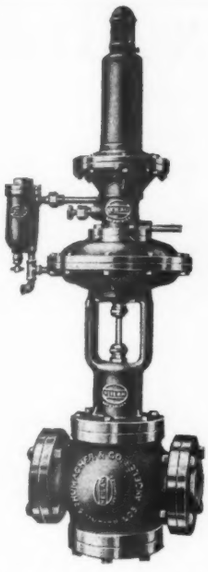
RICHFIELD EXPANDS MARKETS

LOS ANGELES, Calif., May 11.—The Richfield Oil Co. will materially increase its marketing organization in the New England states and other East Coast states according to present plans. The products will be handled in the East by the Walburn Petroleum Co., a New Jersey company. Additional tankers are to be purchased and placed in service between the West Coast refineries of the company and the East Coast.

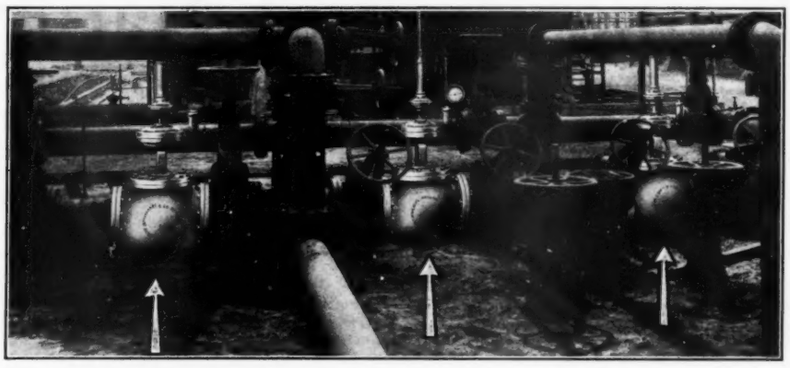
The Richfield company also is active in developing export outlets for its products in Australia, China and Japan. The company expects to ship 3,000,000 cases of gasoline and kerosene to these points in addition to its bulk movement.

EXPERIMENT WITH ASPHALT

An interesting experiment is to be made at Chinook, Montana, this season. The residual oil from skimming plants handling asphaltic base crudes is to be used direct on the streets of Chinook. The oil will be applied at a cost of $15 per city lot and layers of gravel and sand placed over the oil. The process is to continue for three successive years and at the end of that period, Chinook is expected to have an asphalt pavement without a heavy burden of cost on the community.



Neilan Pilot Operated Sensitive Back Pressure Regulator No. 45.



A battery of 3—12 inch Neilan No. 45 holding constant back pressure in large gasoline plant.

Neilan Engineers Still Leading

Neilan engineers have conquered the diaphragm condensation evil with the new dry pipes used in Neilan pilot valves. These dry pipes absolutely prevent the accumulation of water and condensed vapors on the top of the diaphragm. As a result the Neilan No. 45 remains free from sluggish, waterlogged action and holds a constant back pressure with never more than a fraction of a pound variation.

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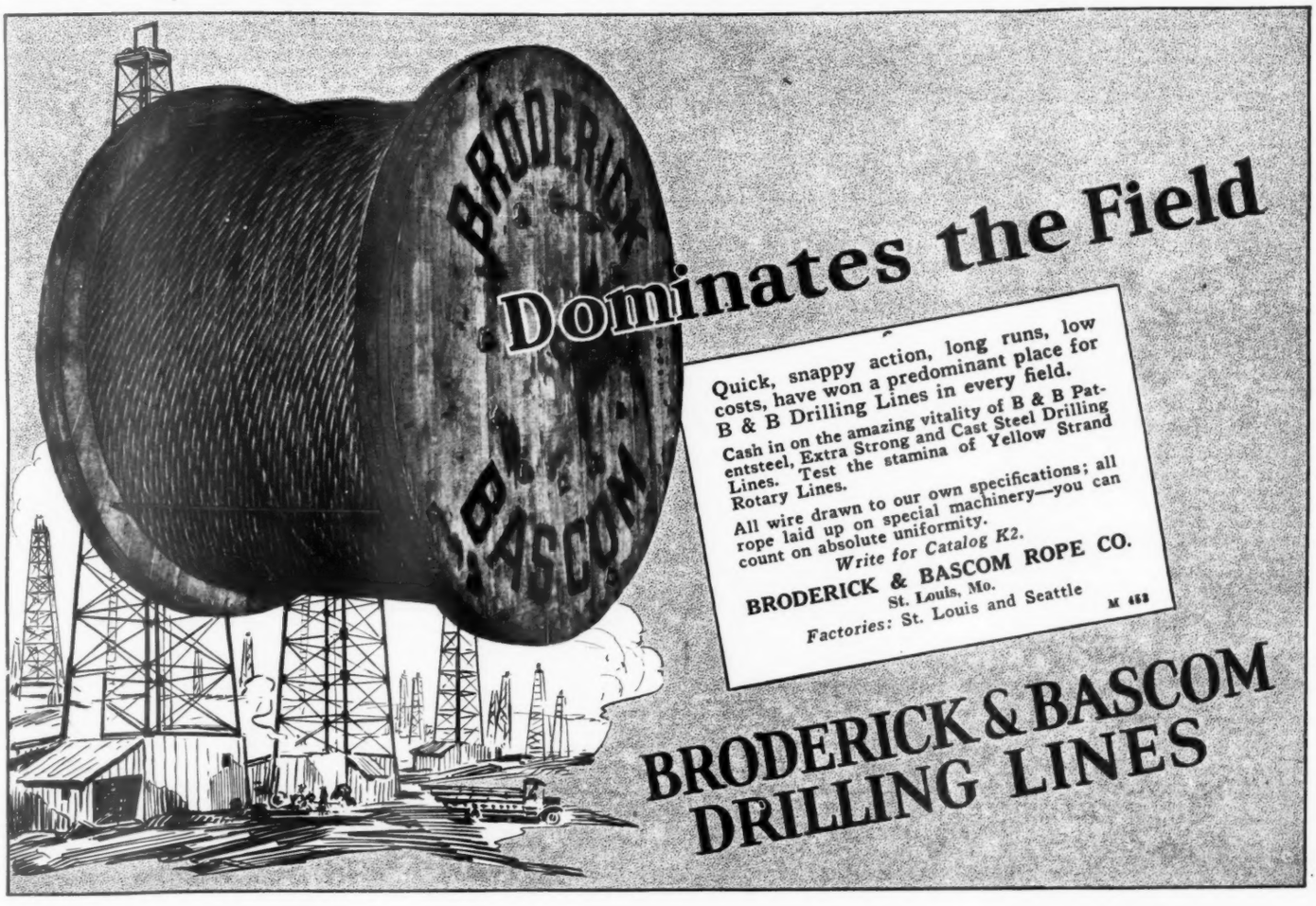

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Composition of Natural Gasolines

Approximate Data on Commercial Grades Obtainable From Engler Distillation Curve. Propane Content Not Significant to Refiner

By G. G. Oberfell, R. C. Alden and L. A. Pocock
Research Department, Phillips Petroleum Co.*

The utility of natural gasoline depends largely on its volatility, which, in turn, is dependent on its content of propane, butanes, and pentanes. It is frequently desirable for the user and manufacturer to know the approximate composition of natural gasoline. Since fractional analyses are more or less cumbersome, a method has been devised for approximating the composition of commercial natural gasolines by means of the Engler distillation curve.

In natural gasoline there are three groups of hydrocarbons with relatively distinct boiling point ranges. These are "butanes and lighter," "pentanes," and "hexanes and heavier." It seemed logical that variations in the proportions in which these groups were present would exert a definite and noticeable effect on the course of the Engler distillation curve. It early became evident there was a general relationship between the composition of natural gasoline and all points below 200 degrees Fahrenheit on the Engler curve. The problem then resolved itself into one of selecting the Engler points which showed the most accurate relationship to composition.

After a very detailed study, the percentage off at 100 degrees Fahrenheit (corrected for distillation loss) was found to be the Engler point which bore the best relationship to the content of "butanes and lighter" of natural gasoline. This relationship was found to be greatly improved by a correction factor dependent on the slope of the distillation curve at 100 degrees Fahrenheit. The slope is expressed as the number of degrees Fahrenheit between 5 per cent before and after 100 degrees Fahrenheit on the Engler curve.

Figure 1 presents graphically the relationships described in the preceding paragraphs. As an example of the use of Figure 1, suppose that careful plotting of the Engler distillation curve on an enlarged scale shows that 60.4 per cent (53.4 per cent over plus 7.0 per cent distillation loss) was distilled off at 100 degrees Fahrenheit and that the temperature range between 55.4 per cent off (5 per cent before 100 degrees Fahrenheit) and 65.4 per cent off (5 per cent after 100 degrees Fahrenheit) was 14 degrees Fahrenheit. From the nomograph at the left of Figure 1, it is to be noted that 60.4 per cent off at 100 degrees Fahrenheit corresponds with 37.9 per cent "butanes and lighter." From the correction curve in Figure 1, a slope of 14 degrees Fahrenheit indicates a deduction of 1.0 per cent. The sample, therefore, had an approximate content of 36.9 per cent (37.9—1.0) "butanes and lighter."

The relationships shown in Figure 1 are based on 113 analyses of natural gasolines, in which were included one sample of petrolic ether, one sample of gas machine gasoline, and five synthetic natural gasolines. The method of fractional analyses employed for these 113 samples was that described by Oberfell, Gregory and Legatski in The Oil and Gas Journal of October 18, 1928.

Table 1 shows the errors encountered in the application of Figure 1 to the 113 samples on which it was based.

TABLE 1

Limits of Errors Encountered in the Application of Figure 1 to the 113 Samples on Which It Was Based

(All percentages are volume percentages of total sample)

Average algebraic deviation (%)	0.06
Average positive deviation (%)	1.5
Average negative deviation (%)	1.7
Average deviation (%)	1.6
No. of samples less than 1% in error	36
No. of samples less than 2% in error	66
No. of samples less than 3% in error	100

*This method was first described in Phillips Petroleum Co., Research Department report of June, 1926.

Of the 113 samples examined for content of "butanes and lighter" by use of Figure 1, only 13 samples gave results more than 3 per cent (of the total sample) in error. From recent use of Figure 1, it is safe to conclude that these 13 samples were either abnormal natural gasolines or were subjected to undue handling losses in the conduct of the Engler test.

The "butanes and lighter" fraction of natural gasoline is the chief contributor of vapor pressure. It is noteworthy that a reasonably accurate method of estimating the proportion of this fraction from the Engler distillation curve is provided by Figure 1.

The percentage of "pentanes" present in natural gasoline was found to be most accurately predicted by the relationship of two points on the Engler distillation curve. These points were the percentages off at 100 and 140 degrees Fahrenheit, corrected for distillation loss.

Figure 2 shows the relationship described in the preceding paragraph. In Figure 2, "Engler percentage off at 100 degrees Fahrenheit, corrected for distillation loss" is the horizontal co-ordinate and "Engler percentage off at 140 degrees Fahrenheit, corrected for distillation loss" is the vertical ordinate. The dotted lines on the chart represent proportions of "pentanes" as indicated.

At the expense of some accuracy in regard to the determination of "butanes and lighter" it has been found convenient to include on Figure 2 the solid lines which indicate the approximate content of "butanes and lighter," as indicated. This permits an estimation of the entire composition of natural gasoline in terms of the three hydrocarbon groups by a single reading from Figure 2. The "hexanes and heavier" are, of course, determined by difference.

As an example of the use of Figure 2, assume that the Engler, used in explanation of Figure 1, had 80.7 per cent distilled off at 140 degrees Fahrenheit (73.7 per cent over plus 7.0 per cent distillation loss). The point on Figure 2 where the 60.4 abscissa intersects the 80.7 ordinate indicates 36.0 per cent "butanes and lighter," 33.1 per cent "pentanes," and 30.9 per cent "hexanes and heavier."

The relationships shown in Figure 2 are based on practically the same set of data which formed the basis for Figure 1. A number of samples were eliminated for the reason that they did not fall within the composition limits of commercial natural gasoline. Table 2 shows the limits of error encountered in the application of Figure 2 to the 95 samples on which it was based.

TABLE 2—LIMITS OF ERRORS ENCOUNTERED IN THE APPLICATION OF FIGURE 2 TO THE 95 SAMPLES ON WHICH IT WAS BASED

(All percentages are volume percentages of total sample)

	"Butanes and lighter"	"Pentanes"	"Hexanes and heavier"
Average algebraic deviation (per cent)	0.08	0.05	0.02
Average positive deviation (per cent)	1.8	2.0	1.9
Average negative deviation (per cent)	2.2	1.9	2.0
Average deviation (per cent)	2.0	2.0	2.0
Number of samples less than 1 per cent in error	32	27	32
Number of samples less than 2 per cent in error	59	62	54
Number of samples less than 3 per cent in error	72	73	70
Number of samples less than 4 per cent in error	79	84	81
Number of samples less than 5 per cent in error	87	88	91

Errors in excess of 5 per cent (of the total volume) were found in 11 of the samples examined by Figure 2. Of these 11 samples, 4 were abnormally high pentane base gasolines and three were abnormally low pentane base gasolines. In 7 of the 11 samples these excessive errors were encountered in two of the fractions. Where both "butanes and lighter" and "pentanes" showed excessive errors, three of the four samples were exceptionally high pentane base gasolines. Where both "butanes and lighter" and "hexanes and heavier" showed excessive errors, each of the two samples was an exceptionally low pentane base gasoline. In the latter case the "butanes and lighter" indicated by graphical analysis was higher than actual and "hexanes and heavier" was lower.

Source of Error

The greatest source of error in the graphical method of analysis resides in the fact that samples subjected to Engler distillation cannot be handled without some loss. Samples for Englers must be poured under atmospheric conditions. The samples subjected to fractional analysis are invariably handled without atmospheric pouring. This difference in method of handling introduces discrepancies which are more pronounced with the more volatile natural gasolines. Furthermore, the Engler distillation is affected somewhat by room temperature, temperature of thermometer when placed in flask, details of manipulation, maintenance of condenser, and receiving bath temperatures, and the personal equation.

Recent experience has shown that when the Engler distillation sample is well cooled, prior to pouring, and the Engler distillation is carefully conducted at a fairly normal room temperature, Figures 1 and 2 give results much more accurate than those indicated by the accompanying tables.

Figures 1 and 2 have been compared with the analytical results obtained by a variety of fractionation methods and

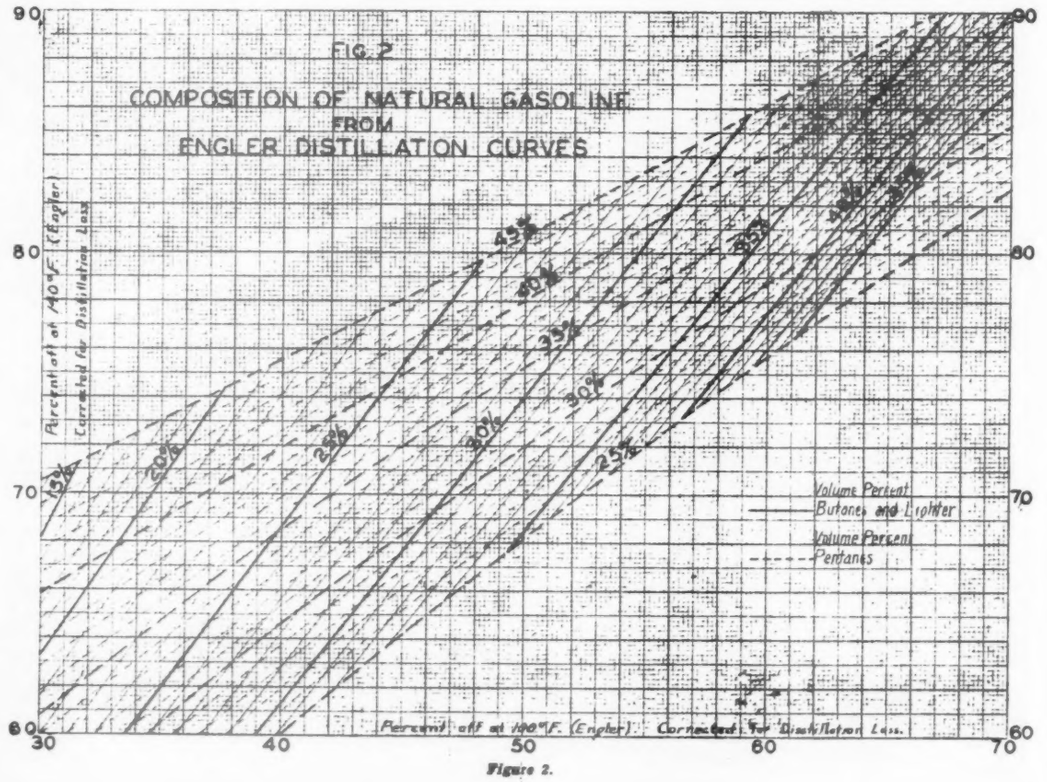

Figure 2.

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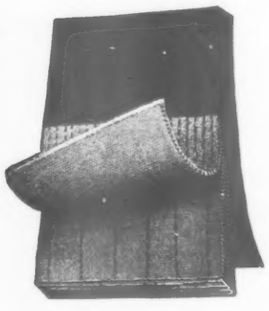

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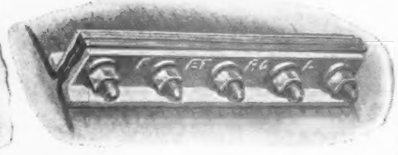

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has been found to give reasonably accurate results in all instances. Besides the analytical methods on which the charts were based, the chief comparison has been with the method described by Oberfell and Alden in The Oil and Gas Journal of October 18, 1928.

Propane is usually present in natural gasoline in relatively small quantities. Although the writers have made very little attempt to estimate the propane content of natural gasoline by an interpretation of the Engler distillation curve, it is believed a very logical procedure would be to compare a carefully determined vapor pressure with the vapor pressure calculated from the graphical analysis on the assumption the gasoline is devoid of propane. The difference between the actual and calculated vapor pressures would be a measure of the propane content of the natural gasoline. One per cent of propane substituted for 1 per cent of butane raises the vapor pressure of natural gasoline about 1.8 pounds per square inch in terms of the Reid vapor pressure at 100 degrees Fahrenheit.

As a matter of fact, the propane content of natural gasoline should be of little interest to the refiner. The percentage of propane normally encountered in natural gasoline is so small as to be of little practical significance when blended with refinery gasoline in the usual proportions. When a natural gasoline manufacturer is considering the elimination of propane from his product for the purpose of increasing yields, an actual fractional analysis is by far the safest guide.

It is interesting to note that Figures 1 and 2 provide the purchaser a means of specifying natural gasoline to meet approximate composition requirements. A judicious selection of vapor pressure limits would provide adequate safeguard against excessive propane contents. In this connection it should be stated the average pentanes content of the butane-free base of the natural gasoline industry is about 45 per cent. More than 5 per cent deviation from this value is the exception rather than the rule.

The writers have serious doubts as to the practicability of buying and selling natural gasoline on the basis of its composition except possibly to occasional chemical users. The purposes of presenting this empirical, but convenient, method of analysis to the industry are to aid in establishing natural gasoline in its legitimate markets and to create a better understanding of its utility.

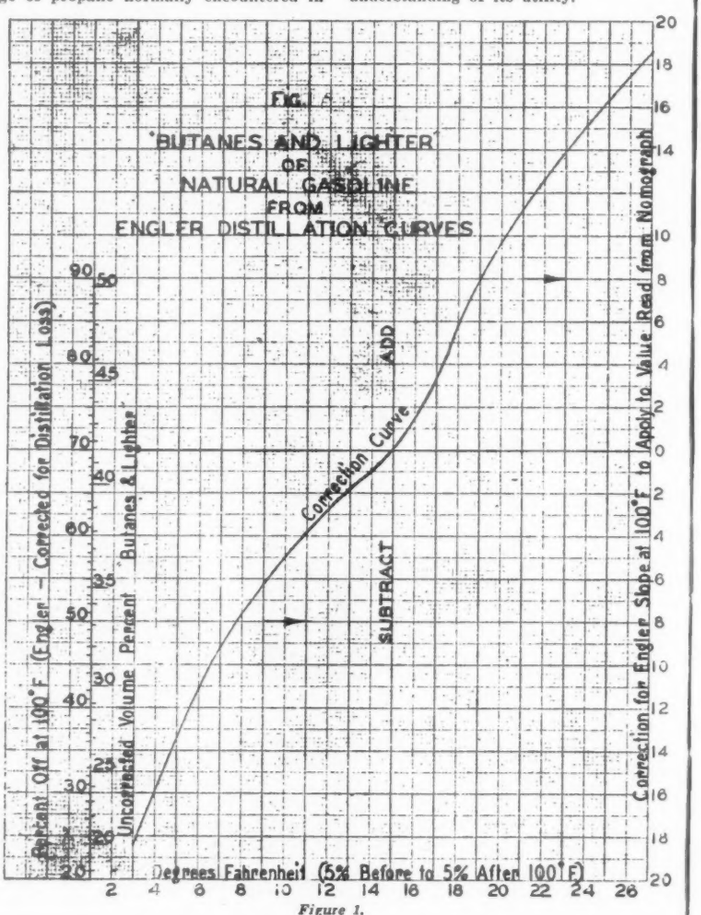


FIG. 1
BUTANES AND LIGHTER
OF
NATURAL GASOLINE
FROM
ENGLER DISTILLATION CURVES
Percent Off at 100°F (Engler — Corrected for Distillation Loss)
Uncorrected Volume Percent Butanes & Lighter
Correction Curve
ADD
SUBTRACT
Degrees Fahrenheit (5% Before to 5% After 100°F)
Correction for Engler Slope at 100°F to Apply to Value Read from Nomograph

Figure 1.

NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

TEXAS PANHANDLE

Gray County

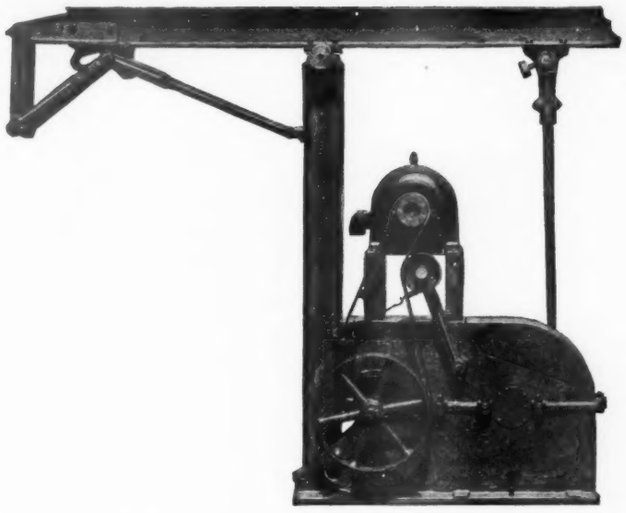
Phillips Petroleum Co.'s No. 1 J. S. Morse, 330 feet north and east of the SW cor. of the NE of the SW of Section 68, Block 25, I.&G.N. Danciger Oil & Refining Co.'s No. 1 M. D. Davidson and others, 660 feet north and 990 feet east of the SW cor. of the SE of Section 86, Block B-2, H.&G.N. Danciger-Washoma's No. 2 R. E. Smith, 330 feet north and west of the SE cor. of the SW of Section 149, Block 3, I.&G.N.

Hutchinson County

Danciger Oil & Refining Co.'s No. 1 J. L. Moore, 330 feet north and west of the SE cor. of the NW of the SE of Section 125, Block 4, I.&G.N. Phillips Petroleum Co.'s No. 4 J. M. Sandford-Chap, 990 feet north and 330 feet west of the SE cor. of Section 78, Block 46, H.&T.C. Phillips Petroleum Co.'s No. 2 Johnson Brothers-Trigg, 330 feet south and east of the most westerly NW cor. of the N. T. Trigg Survey No. 2, Block OB.

Wheeler County

Lela Oil & Gas Co.'s No. 5 Williams & Laycock, at the center of the NW of the NE of Section 9, Block 27, H.&G.N.



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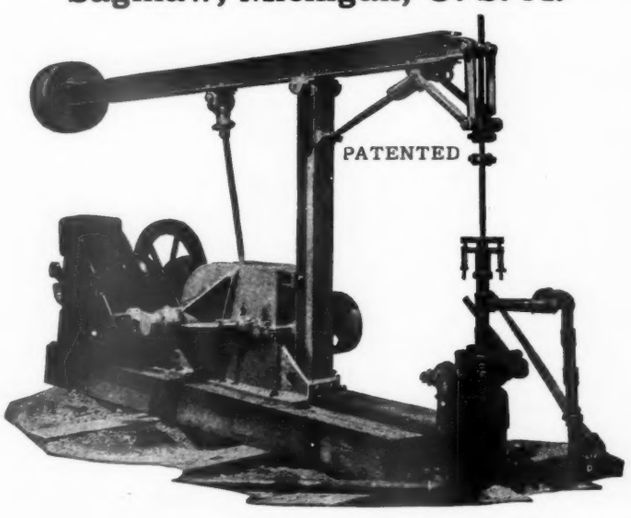
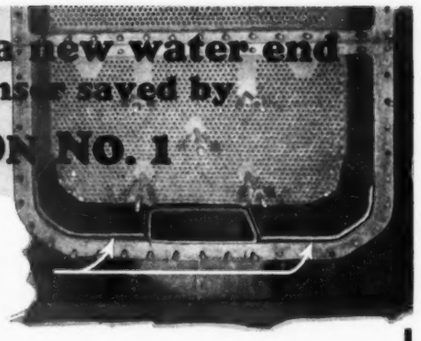


$500.00 for a new water end on this condenser saved by SMOOTH-ON No. 1



SCRAPS of marble thrown into adjacent water by a marble yard were picked up by the circulating system of this 4,000 hp. condenser in an Astoria, N. Y., power plant and wore holes through the water box. A new water end and the labor of installing would have cost at least $550.00, so the Engineer decided to build up the worn spots and stop the leaks with Smooth-On No. 1. His method is evident from the picture. The Smooth-On was plastered over the weak spots and covered by iron plates which had been shaped to the contour of the box. With this strong, solid backing, the old metal, the hardened Smooth-On and the plates become virtually one solid piece with strength and usefulness fully equal to those of a new part—and there is no reason why the repair should not double the life of the original water end.

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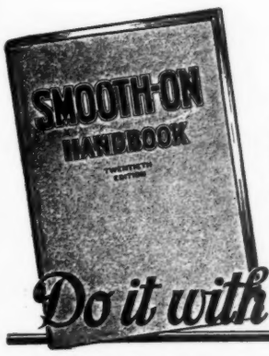

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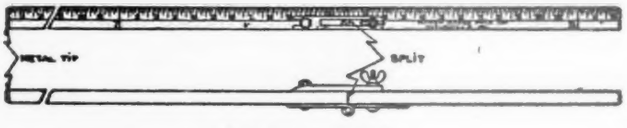

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Same company's No. 6 Williams & Laycock, at the center of the SW of the NE of Section 9, Block 27, H.&G.N. Martin & Debous' No. 1 R. W. Griswold, at the center of the SE of the SW of Section 1, Block 24, H.&G.N. Wisch Kamper and others' No. 1 S. Guest, at the center of the NW of the NE of Section 28, Block 17, H.&G.N.

Archer County

Empire Gas & Fuel Co.'s No. 1 M. L. Sterrett, 150 feet south and east of the NW cor. of the west half of the north 160 acres of the M. L. Sterrett 320-acre tract out of Section 2, S.P.R.R., A-1,164. F. M. Gohlke's No. 3 L. F. Wilson-B, 450 feet north and 150 feet west of the SE cor. of Lot 25, Wilson's Geraldine Subdivision. H. Hines and others' No. 1 L. F. Wilson (McCrory, trustee), 175 feet north and 350 feet east of the SW cor. of Lot 31, T. J. Markley Subdivision, Section 121, A.T.N.C.L. D. O. Johnson and others' No. 8 L. F. Wilson-A, 150 feet north and 450 feet east of the SW cor. of Lot 26 Wilson's Geraldine Subdivision. McCarty Oil Co.'s No. 1 L. F. Wilson (Gibbs), 150 feet south and east of the NW cor. of Lot 292, Geraldine Subdivision. Pandem Oil Corp.'s No. 3 Mrs. A. B. Wallace, 150 feet south and 750 feet east of the NW cor. of the east 30 acres of the north 70 acres of Section 11, Denton County School Land, League 3, A-117. Pandem Oil Corp.'s No. 4 Mrs. A. B. Wallace, 150 feet south and 475 feet east of the NW cor. of the east 30 acres of the north 70 acres of Section 11, Denton County School Land, League 3, A-117. Same company's No. 5 Mrs. A. B. Wallace, 450 feet south and east of the NW cor. of the east 30 acres of the north 70 acres of Section 11, Denton County School Land, League 3, A-117.

F. Payne and others' No. 3 Mrs. J. E. Parrish-A, 150 feet south and 450 feet east of the NW cor. of their 20-acre lease "A" out of the S.P.R.R. Survey No. 2, A-1,004. C. P. Sheldon's No. 2 W. H. Chilson, 150 feet north and 750 feet east of the SW cor. of the east 81 acres of the W. H. Chilson tract out of Section 2, Denton County School Land, League 3, A-117. The Texas Company and others' No. 2 Kemp & Kempner-B, 500 feet north and 1,472 feet west of the SE cor. of Block 67, Kemp Wichita Valley Land. Atlantic Oil Producing Co. and Van-Mex Oil Co.'s No. 1 R. D. Andrews, 750 feet south and east of the NW cor. of the south 200 acres of the north 250 acres of the F. A. Whitaker Survey A-674. Beavers & Rose's No. 1 S. J. Hayter, 150 feet south and east of the NW cor. of the north 30 acres of the south 45 acres of the S. J. Hayter 95-acre tract out of Section 2,402, T.E.&L. H. Hines and others' No. 1 G. B. Hamilton, 750 feet north and east of the SW cor. of Section 5, Crawford Subdivision. H. Hines and others' No. 1 G. B. Hamilton, 750 feet north and east of the SW cor. of Section 5, Crawford Subdivision. H. Hines and others' No. 1 J. T. Slaughter, 150 feet south and east of the NW cor. of the NW 60 acres (square) of Section 15, G. P. Meade Subdivision, L. M. Pasture.

Brewster County

E. L. Chapman's No. 2 S. P. Skinner, 1,520 feet north and 1,980 feet west of the SE cor. of Section 100, Block 2, G.C.&S.F.

Brown County

Baker-Kynard and others' No. 1 H. J. Marr, 150 feet north and east of the SW cor. of the G. S. Gillispie Survey A-1,214. G. A. Buder, trustee, No. 2 F. H. Cross, 2,510 feet south and 400 feet west of the NE cor. of the R. Honeycutt Survey No. 623. E. P. Campbell and others' No. 1 A. A. Turner, 310 feet south and 769 feet west of the NE cor. of the J. T. Metcalf Survey, A-1,995. Cranfill & Reynolds' No. 2 H. J. Marr-A, 150 feet south and 1,339 feet east of the NW cor. of the H. P. Tuggles Survey No. 62, A-895. Humble Oil & Refining Co.'s No. 12 H. Byler, 553 feet south and 1,385 feet west of the NE cor. of their lease out of Section 43, T.&N.O. Janellen Oil Co.'s No. 1 T. Huggins, 1,050 feet south and 1,200 feet west of the NE cor. of the T. Huggins 82-9-acre tract out of the R. Nixon Survey No. 101. Lloyd Oil Corp.'s No. 21 J. C. Collier, 1,110 feet east of the Ft.W.&R.G. right of way and 300 feet south of the north line of the J. C. Collier 320-acre tract out of the Mrs. William A. Smith Survey No. 139.

Callahan County

Cranfill & Reynolds' No. 1 I. G. Harris, 2,603 feet north and 1,291 feet west of the SE cor. of Section 19, B.B.B.&C.

Clay County

Belcher and others' No. 3 H. C. Evans and others, 150 feet south and west of the NE cor. of the south 40 acres of the east 88 acres of Section 6, Parker County School Land, A-374. Mid-Continent Holding Co.'s No. 3 J. D. Stine and others-A, 150 feet south and east of the NW cor. of the SW of Section 7, Parker County School Land, A-374.

Coleman County

Canyon Oil & Gas Co.'s No. 1 J. Keller, 150 feet north and 1,468 feet west of the SE cor. of Section 9, A. White Survey No. 161. Eastland Oil Co. and others' No. 3 J. P. Morris-B, 150 feet north and west of the SE cor. of Section 14, William Weber Survey No. 722.

Comanche County

L. B. Fain's No. 1 L. Poteet, 1,120 feet north and 900 feet west of the SE cor. of the south 80 acres of the SW of Section 45, Deaf & Dumb Asylum Land.

Cooke County

Kewanee Oil & Gas Co.'s No. 4 R. J. Timmis-B, 190 feet south and 121 feet west of the most easterly NE cor. of their 104-acre lease "B" out of the E.T. R.R. Survey No. 5, A-363.

Crane County

C. C. Duffey and others' No. 5 Cowden Brothers & Co., 200 feet north and west of the SE cor. of Section 17, Block X, C.C.S.D.&R.G.N.G.

Erath County

Fletcher & Moore's No. 1 Cage & Malloy, 2,500 feet north and 3,000 feet east of the SW cor. of the Josiah Bishop Survey. Frazier-Watson and others' No. 1 E. B. Blanton, 330 feet south and west of the NE cor. of the S half of the NW of the Indianola R.R. Survey No. 14.

Eastland County

Chestnut & Smith Corp.'s No. 1 M. H. Fleming, 330 feet north and east of the SW cor. of the SW of the NW of Section 61, Block 4, H.&T.C. Crabb-McNeel & Canyon Oil & Gas Co.'s No. 1 W. F. Turner, 150 feet south and 485 feet west of the NE cor. of the north 20 acres of the SE of the NW of Section 30, Block 2, H.&T.C. Lone Star Gas Co.'s No. 1 O. P. Storm, 1,760 feet north and 1,880 feet east of the SW cor. of Section 470, S.P.R.R. Southern Oil & Producing Co. and others' No. 1 B. Owens, 785 feet south and 660 feet east of the NW cor. of Section 48, Block 4, H.&T.C. Swoveland and others' No. 1 H. S. Stroebel, 150 feet south and east of the NW cor. of the SE of Section 71, Block 3, H.&T.C. Texas Development Co.'s No. 1 Mrs. B. C. Lewis, 250 feet north and 200 feet west of the SE cor. of the SW of the SE of Section 43, Block 4, H.&T.C.

Fisher County

Mid-Kansas Oil & Gas Co. and Phillips Petroleum Co.'s No. 1 H. J. Stephenson, 330 feet south and west of the NE cor. of the SE of the H. J. Stephenson 200-acre tract out of Section 26, El Paso County School Land, League 317.

Glasscock County

Gibson & Johnson's No. 1 Irene Dean, 1,320 feet south and east of the NW cor. of Section 3, Block 33, Township 5s, T.&P.

Howard County

Amerada Petroleum Corp. and Rycade Oil Corp.'s No. 9 Dora Roberts, 1,115 feet north and 622 feet west of the SE cor. of Section 128, Block 29, W.&N.W. R.R. Humble Oil & Refining Co.'s No. 1 W. R. Settles, 330 feet north and east of the SW cor. of Section 132, Block 29, W.&N.W.R.R. The California Co.'s No. 6 Dora Roberts, Lease 2, 330 feet north and 1,650 feet west of the SE cor. of Section 137, Block 29, W.&N.W.R.R.

Irion County

Irion County Drilling Co.'s No. 2 F. Tankersley, 2,140 feet north and 1,820 feet east of the SW cor. of Section 23, G.C.&S.F.

Jack County

Buttram Petroleum Co.'s No. 1 S. V. Vanhooser, 285 feet south and 250 feet

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west of the NE cor. of the S.F.I.W.Co. Survey No. 1, A-558. Murback-Holmberg and others' No. 1 Fred Warren, 450 feet north and 150 feet east of the SW cor. of the F. Warren tract out of Section 2,784, T.E.&L.

Jones County

E. P. Campbell and others' No. 1 S. W. King, 800 feet south and 500 feet east of the NW cor. of the south 240 acres of the M. Bueno Survey No. 197, A-14.

Mitchell County

Spence and others' No. 1 W. C. Brown, 1,320 feet south and 2,040 feet east of the NW cor. of Section 37, Block 25, T.&P.

Pecos County

Gulf Production Co.'s No. 17 M. A. Smith and others, Tract B, 2,722 feet south and 2,745 feet east of the NW cor. of Section 22, Block 194, G.C.&S.F. Same company's No. 18 M. A. Smith and others, Tract B, 2,727 feet south and 1,376 feet east of the NW cor. of Section 22, Block 194, G.C.&S.F. Cromwell & Kimberlin's No. 1 T. S. Jackson, 2,490 feet southeast of the NW line and 1,170 feet southwest of the NE line of Section 28, Block 3, H.&T.C. Plymouth Oil Co.'s No. 2 P. A. Perry, 330 feet south and west of the NE cor. of Section 29, Block 178, T.C.R.R. C. Williams and others' No. 1 W. A. Sanford, 160 feet southeast of the NW line and 1,150 feet northeast of the SW line of Section 55, Block 10, H.&G.N.

Palo Pinto County

Burell Stiff Oil Co.'s No. 1 W. L. Costello, 300 feet southeast of the NW line and 300 feet southwest of the NE line of the W. L. Costello 304-acre tract out of the Julia Lazarin Survey A-288. Upham Gas Co.'s No. 1 M. B. Costello, 600 feet southwest of the NE line and 600 feet northwest of the SE line of the M. B. Costello 120-acre tract out of the J. T. Smith Survey A-410. Same company's No. 2 J. H. Wester, 700 feet southeast of the NW line and 700 feet northeast of of the SW line of the northwest 50 acres of the J. H. Wester 151-acre tract out of the J. T. Smith Survey A-410.

Schleicher County

Underwood Oil Co.'s No. 1 Louis Tisdale, 330 feet south and east of the NW cor. of Section 74, Blk. LL, G.C.&S.F.

Shackelford County

M. Best and others' No. 1 J. M. Isenhower, 450 feet north and 160 feet west of the SE cor. of the W half of the J. M. Isenhower 640-acre tract out of the N. R. Brister Survey. Less Combest Oil Co.'s No. 1 M. E. Anderson, 1,200 feet south and east of the NW cor. of Section 65, Lunatic Asylum Land. Same company's No. 2 J. B. Matthews, 300 feet north and 150 feet east of the CEL of Section 30, Block 10, E.T.R.R., and located in Section 1. Same company's No. 1 Reynolds Cattle Co., 150 feet north and west of the SE cor. of the S half of the NE of Section 55, Block 10, E.T.R.R. Cranfill & Reynolds' No. 1 R. J. Moberly, 45 feet south and 450 feet east of the NW cor. of the SE of Section 48, Block 11, T.&P. Earl & Dull's No. 7 J. B. Matthews, 150 feet north and 450 feet west of the SE cor. of the SE of the NE of Section 32, Block 10, E.T.R.R. Frizzell & Smalley's No. 1 J. B. Matthews, 150 feet north and west of the SE cor. of the NE of the SE of Section 56, Block 10, E.T.R.R. Grisham-Hunter Corp.'s No. 2 W. Y. and R. A. Davis, 1,170 feet south and 150 feet east of the NW cor. of Section 20, Block 13, T.&P. J. P. Harris' No. 1 L. H. Hill, 780 feet north and 600 feet west of the SE cor. of the E half of the SE of Section 2, Lunatic Asylum Land. Hughes & Shulman's No. 1 J. C. Smith, 2,450 feet north and 1,670 feet west of the SE cor. of Section 9, Block 11, T.&P. Humble Oil & Refining Co.'s No. 1 W. P. Newell, 1,385 feet south and 1,406 feet east of the NW cor. of Section 87, Block 10, E.T.R.R. W. L. Knight's No. 1 W. D. Reynolds, 450 feet north and west of the SE cor. of the NW of Section 26, Block 11, T.&P. Ohio-Texas Oil Co.'s No. 14 J. B. Matthews, 2,200 feet south and 750 feet west of the NE cor. of Section 29, Block 10, E.T.R.R. Same company's No. 3 J. B. Matthews-C, 150 feet south

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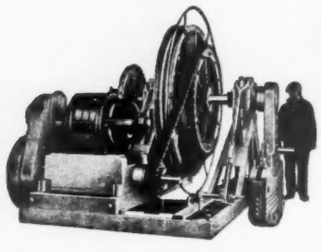

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and east of the NW cor. of the NW of the SW of Section 29, Block 10, E.T.R.R. W. R. Ritterbusch's No. 1 J. H. Nail, at the center of the NW of the NW of Section 41, E.T.R.R., Block 10. Roeser & Pendleton's No. 1 B. S. Walker, 775 feet northeast of the SW line and 462 feet northwest of the SE line of Section 377, T.E.&L. Tannehill and others' No. 1 J. K. Elliott, 200 feet south and 1,130 feet east of the NW cor. of Section 9, Lunatic Asylum Land. Texas-Consolidated Oil Co.'s No. 1 J. F. Dyer, 150 feet north and west of the SE cor. of the N half of the SW of Section 83, Block 12, T.&P.

Stephens County

F. C. Clark and others' No. 2 R. O. Jackson, 400 feet north and 800 feet west of the SE cor. of the NE of Section 20, Block 6, T.&P. Prairie Oil & Gas Co.'s No. 2 R. M. Rogers, 250 feet south and west of the NE cor. of Section 27, Block 5, T.&P.

Winkler County

Humble Oil & Refining Co.'s No. 12 T. G. Hendricks-C, Lease No. 2, 1,980 feet north and 1,325 feet east of the SW cor. of Section 10, Block B-12, School Land. Magnolia Petroleum Co.'s No. 2 W. F. Scarborough, 1,620 feet north and 990 feet west of the SE cor. of Section 1, Block C-22, School Land.

Wichita County

Magnolia Petroleum Co.'s No. 14 J. W. Donehoo, 900 feet north and 1,375 feet west of the SE cor. of the J. W. Robertson Survey A-252. Barclay & Faith Oil Co.'s No. 2 Kemp & Kempner, 100 feet south and 150 feet west of the NE cor. of Lot 7, Block 40, Kemp Wichita Valley Land. Barclay & White's No. 1 W. J. Logan and others, 150 feet north and west of the SE cor. of the SW of Block 37, Kemp Wichita Valley Land. Comac Oil Co. and Prairie Oil & Gas Co.'s No. 5 M. P. Bishop, 790 feet north and 150 feet west of the SE cor. of the M. P. Bishop tract out of the L. Netherly Survey A-240. H. Hines' No. 4 T. L. Burnett and others-A, 450 feet south and 200 feet west of the NE cor. of the SW of the SE of Section 6, S.A.&M.G., A-464. T. F. Hunter's No. 2 J. L. and T. J. Waggoner-C, 150 feet north and east of the SW cor. of Lot 10, Section 2, G.C. &S.F., A-772. King Royalty Co.'s No. 3 J. F. Boyd, 450 feet south and 150 feet west of the NE cor. of Lot 12, J. T. Lewis Survey A-462. Reno Oil Co. & Goldsmith's No. 1 J. E. Roiler estate, 200 feet south and 150 feet west of the NE cor. of Lot 8, McKinney & Williams Subdivision, and located in the S. Holloway Survey A-493. J. G. Rowe and others' No. 2 J. L. and T. J. Waggoner, 150 feet south and west of the NE cor. of Lot 13, Section 2, G.C.&S.F., A-772. Stump & Heydrick's No. 2 B. N. Ferguson, 450 feet south and 150 feet east of the NW cor. of Lot 11, J. T. Lewis Survey A-462.

Wilbarger County

R. I. Carter's No. 2 W. T. Waggoner, 465 feet south and 150 feet east of the NW cor. of the SW of Section 9, Block 4, H.&T.C. Fain-McGaha Oil Corp.'s No. 12 W. T. Waggoner-L, 205 feet north and 1,135 feet west of the SE cor. of their 200-acre lease "L" out of Section 31, Block 4, H.&T.C. Lewis & Payne's No. 2 W. T. Waggoner, 205 feet south and 660 feet west of the NE cor. of the SE of the SW of Section 17, Block 4, H.&T.C. Melat Oil Co.'s No. 3 W. T. Waggoner-A, 2,731 feet north and 150 feet west of the SE cor. of Section 10, Block 4, H.&T.C. Phillips Petroleum Co.'s No. 3 W. T. Waggoner-S, 330 feet south and east of the NW cor. of the SE of the SW of Section 45, Block 4, H.&T.C. Same company's No. 3 W. T. Waggoner-U, 300 feet south and east of the NW cor. of the NE of the NW of Section 44, Block 4, H.&T.C. Same company's No. 2 W. T. Waggoner-DD, 300 feet south and 294 feet east of the NW cor. of their 39.5-acre lease "DD" out of Section 42, Block 4, H.&T.C. Robertson and others' No. 2 W. T. Waggoner-Webb, 2,490 feet south and 150 feet west of the NE cor. of Section 10, Block 4, H.&T.C. Staley-Wynee & Co.'s No. 7 W. T. Waggoner-F, 200 feet south and 784 feet east of the NW cor. of the SE of the SE of

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Section 32, Block 4, H.&T.C. Same company's No. 1 W. T. Waggoner-S, 160 feet south and east of the NW cor. of the SE of the SW of Section 25, Block 4, H. &T.C. Waggoner Refining Co.'s No. 1 W. W. T. Waggoner-J, 205 feet south and west of the NE cor. of the W half of the NE of Section 25, Block 4, H.&T.C.

Young County

O. Bratcher's No. 3 E. R. Prideaux, 150 feet south and west of the NE cor. of the north 25 acres of the south 43 acres of the west 80 acres of the E. R. Prideaux 126-acre tract out of the S. Tynes Survey A-274. T. Casey and others' No. 3 J. L. Boone, 150 feet south and 690 feet east of the NW cor. of the SW of the NE of Section 1, B.B.B.&C., A-34. Cunningham & Ford's No. 1 C. F. Newman, 450 feet north and 150 feet west of the most southerly SE cor. of the C. F. Newman 285-acre tract out of the S. Sallie Survey A-252. W. L. Hawkins and others' No. 1 J. C. Owens, 285 feet south and 150 feet east of the NE cor. of the G. P. Stewart 110-acre tract and located on the J. C. Owen 160-acre tract out of the B.B.B.&C. Survey No. 1, A-35. C. A. Horal's No. 1 Robert Morrison, 250 feet north and west of the SE cor. of Section 431, T.E.&L. Lloyd Oil Corp.'s No. 2 J. S. Gregg, 1,009 feet north and 713 feet west of the SE cor. of the NE of Section 1, Gal. Br. & Nav. Co. Survey A-1,947. May-Camp Drilling Co.'s No. 2 H. O. and E. R. Prideaux, 750 feet south and 150 feet west of the NE cor. of Section 15, Young County School Land, A-1,284. Mid-Tex Oil Co.'s No. 1 R. J. Calvin, 450 feet south and 150 feet west of the NE cor. of the W half of the north 50 acres of the east 100 acres of the R. J. Calvin 200-acre tract out of the A. Rohus Survey A-240. Panhandle Refining Co. and others' No. 15 H. O. Prideaux-C, 150 feet north and 1,150 feet east of the SW cor. of their 105-acre lease "C" out of the A. Rohus Survey A-240. Parks & Pennell's No. 1 J. C. McDonald, 150 feet north and east of the SW cor. of Section 1, C.T.R.R., A-68. Petroleum Production Co.'s No. 1 J. W. White, 150 feet south and west of the NE cor. of the west 30 acres of the east 60 acres of the J. W. White 109-acre tract out of Section 160, T.E.&L. Riggs & Oliphant and others' No. 2 C. W. Langston, 950 feet south and 150 feet east of the NW cor. of Section 1,490, T.E.&L. W. A. and Mike Smith and others' No. 1 A. C. Bentley, 150 feet north and west of the SE cor. of the east 120 acres of the N half of Section 283, T.E.&L. Steed & Gaus' No. 14 L. A. Snider, 750 feet south and 2,000 feet east of the NW cor. of the Robert Wilson Survey A-1,276. Same company's No. 15 L. A. Snider, 1,740 feet south and 2,620 feet east of the NW cor. of the Robert Wilson Survey A-1,276. Texas Unity Oil Co.'s No. 1 H. F. Haygood, 150 feet north and west of the SE cor. of the east 40 acres of the south 62 acres of the west 102 acres of the N half of Section 1,466, T. E.&L. Wise & Jackson's No. 7 R. J. Calvin, 450 feet south and 1,425 feet east of the NW cor. of the R. J. Calvin 200-acre tract out of the A. Rohus Survey A-240. Wootten & Reed's No. 1 W. E. Alexander, 458 feet south and 1,229 feet east of the NW cor. of the S. Tynes Survey A-274. F. A. Forbes and others' No. 1 R. M. Williams, Section 28, 150 feet south and 400 feet west of the NE cor. of the north 28 acres of the south 48 acres of the R. M. Williams 156-acre tract out of the W. M. Morris Survey A-1,495.

Corrections

In Eastland County: Southern Oil & Production Co.'s No. 2 A. L. Thorp, 1,100 feet south and 724 feet west of the NE cor. of the SE of Section 456, S.P. R.R.

In Shackelford County: Less Combest and others' No. 1 J. B. Matthews, 150 feet south and 150 feet east of the NW cor. of the NE of the NW of Section 30, Block 10, E.T.R.R.

In Wheeler County: Lela Oil & Gas Co.'s No. 1 Williams & Laycock, 330 feet south and 330 feet west of the NE cor. of the SE of the NE of Section 9, Block 27, H.&G.N.

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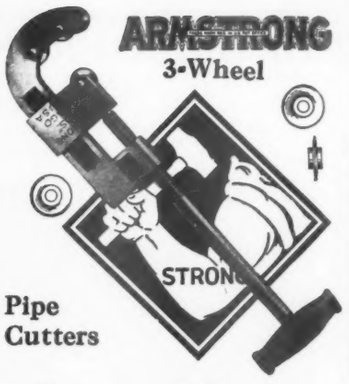

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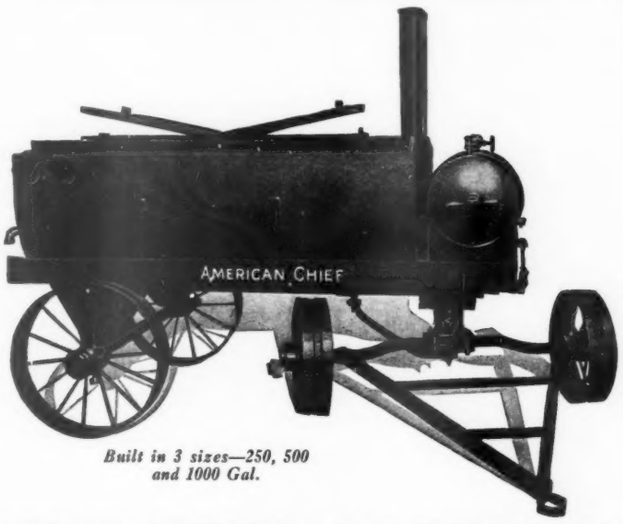

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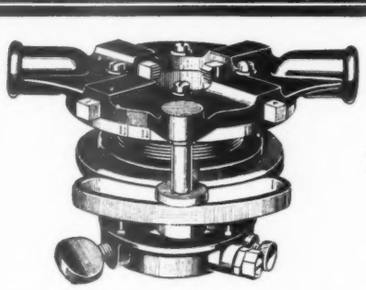

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Detailed Operations in All Fields for Month of April

SUMMARY OF ALL FIELDS
Wells Completed in April

	Comp.	Prod.	Dry	Gas
Eastern	438	2,218	26	65
Lima	16	154	5	3
Central Ohio	100	722	28	43
Michigan	49	17,087	8	2
Kentucky	94	2,240	28	4
Tennessee	0	0	0	0
Indiana	8	157	2	3
Illinois	10	184	7	0
Kansas	159	28,556	69	11
Oklahoma	351	77,060	159	15
North Central Texas	278	9,959	145	12
East Central Texas	11	0	10	1
East Texas	12	15	4	7
West Texas	88	128,478	37	1
Texas Panhandle	42	4,382	6	15
Gulf Coast	155	57,975	60	3
Southwest Texas	136	27,475	45	15
Mississippi	2	0	2	0
North Louisiana	49	485	13	24
Arkansas	18	4,339	10	1
Montana	14	503	2	2
Wyoming	5	396	2	0
Colorado	3	280	0	0
New Mexico	8	533	5	1
Utah	1	0	1	0
Total April	2,047	363,198	684	233
Total March	1,762	420,128	568	201
Difference	285	56,930	116	32

Rigs and Wells Drilling

	Rigs	Drlg.	Total
Eastern	108	396	504
Lima	7	16	23
Central Ohio	76	155	231
Michigan	82	105	187
Kentucky	18	211	229
Tennessee	4	12	16
Alabama	1	9	10
Mississippi	6	18	24
Indiana	5	44	49
Illinois	2	23	25
Kansas	62	301	363
Oklahoma	134	740	874
North Central Texas	86	383	469
East Central Texas	2	20	22
East Texas	2	19	21
West Texas	37	261	298
Texas Panhandle	27	124	151
Gulf Coast	33	204	237
Southwest Texas	45	186	231
North Louisiana	32	98	130
Arkansas	9	55	64
Montana	25	100	125
Wyoming	16	139	155
Colorado	16	90	106
New Mexico	17	68	85
Utah	5	30	35
Total April	857	3,807	4,664
Total March	896	3,773	4,669
Difference	39	34	5

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	8	109	5	0
Creek	27	999	18	1
Kay	7	15	4	2
Hughes	9	1,467	2	2
Kiowa	10	8	8	1
Muskogee	16	55	13	1
Okfuskee	8	895	3	0
Okmulgee	10	67	6	1
Osage	32	697	17	0
Pawnee	7	600	2	0
Pontotoc	8	185	2	0
Pottawatomie	76	36,777	19	0
Seminole	67	34,069	22	3
Stephens	30	890	15	1
Wagoner	10	22	7	1
Miscellaneous	28	205	16	2
Total April	351	77,060	159	15
Total March	300	105,749	94	28
Difference	51	28,689	65	13

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Beckham	0	10	10
Carter	0	18	18
Cotton	1	12	13
Creek	18	63	81
Grady	0	4	4
Grant	1	8	9
Hughes	3	21	24
Kay	0	10	10
Kiowa	1	11	12
Logan	1	22	23
Muskogee	6	24	30
Oklahoma	5	31	36
Okfuskee	5	34	39
Okmulgee	5	23	28
Osage	13	30	43
Pawnee	1	14	15
Payne and Lincoln	5	15	20
Pontotoc	0	16	16
Pottawatomie	8	90	98
Seminole	39	190	229
Stephens	10	21	31
Tulsa	0	7	7
Wagoner	2	7	9
Miscellaneous	10	59	69
Total April	134	740	874
Total March	142	706	848
Difference	8	34	26

WELLS COMPLETED
CARTER COUNTY

30-1s-3w Dixon, Humble O. & R. 6 .. dry
19-5s-3w Myer, Devonian Oil 1 ..... dry
19-1s-3w Winters, Magnolia Pet. Co 1.. 33
19-1s-3w Eason, Atlantic O.P. Co. 3 35
24-1s-3w Eaves, The Texas Company 2 dry
30-1s-3w Dixon, Humble O.&R. Co. 7 .. dry
Putman, Magnolia Pet. Co. 1. 41
24-5s-1 Jolliff, Schermerhorn O. et al 2 dry

Wells completed 8
Production 109
Dry 5

CREEK COUNTY

26-18- 7 McIntosh, Shaffer O.&R. 1 .... dry
21-17- 8 Stidham, Billingslea et al 1.. dry
1-17-11 Frank, Jackson & Wise 1.. dry
7-17-11 Fulsom, A. Avers et al 1.... dry
11-17-12 Glenn, A. J. Spears et al 9... 40
21-16- 8 Parks, Tidal Oil Co. 2..... 80
10-15- 8 Lewis, Billingslea & Shaffer O.&R. 2 600
23-19- 7 Porter, R. E. Freeman 1.. dry
24-16-10 Stuart, Anderson & Prichard 1 dry
16-14- 8 Yahola, The Prairie O.&G. 2.. dry
17-18- 7 W. Starr, Silurian Oil Co. 25 . 50
13-18-11 Lee, Tidal Osage Oil Co. 2 .. dry
4-18-12 Brown, Lynch et al 1..... 25
30-16-10 Hutton, Transcon. Oil Co. 1.. dry
30-15- 9 Conneseny, C. G. Tibbens 33.. dry
8-19- 7 Asbury, Smith & Steinberger 1 dry
9-19- 7 Colbert, Winemiller et al 1-A. dry
7-19- 9 Dickinson, Dixie Oil Co. 6 .. gas
14-18-10 Barker, Schermerhorn Oil 1 dry
4-18-12 Brown, Devonian Oil Co. 2.. 10
34-16-10 Page, Red Bank Oil Co. 1-A .. dry
32-18-11 Hull, C. A. Cole et al 1.... dry
16-17-11 Wilson, Thompson & Black 2. dry
18-16- 9 Durant, Carter Oil Co. 2..... 171
16-16-12 Cumsey, Paraffine O&R Co. 1 dry
17-14- 8 Clark, Flynn & Morgan 1.... dry
5-16- 8 Hammer, The Prairie O&G 5.. 23

Wells completed 27
Production 999
Dry 18
Gas 1
Gas production 2,500,000

KAY COUNTY

2-27-3 Murdock, Oil Belt Oil 2-A .... dry
24-27-1 Gilbert, Wilson et al 2..... dry
6-26-1w North No. 2, Marland P Co. 2 dry
29-25-1w Cassity, The Texas Co. 1.... 15
18-29-1 Shimp, Marland Oil Co. 1.. dry
36-28-1w School Land, Harris & Haun 1 gas
28-27-1 Smith, C. A. Leonard et al 2 gas

Wells completed 7
Production 15
Dry 4
Gas 2
Gas production 400,000

HUGHES COUNTY

18-5- 8 Millner, W. R. Ramsey 6 435
8-8- 9 Harjo, Twin State Oil 1..... dry
33-9- 9 M. Long, Champlin O.&R. Co. 1 gas
25-8-10 Harjo, Howard Pet. Co. 1.... dry
19-5- 8 Berry, Homaokla Oil Co. 7.... 265
Whitney, W. R. Ramsey 5.... 140
21-9-10 Buck, Fuhrman & Newman 2.. gas
19-5- 8 S. Nitchey, Sunray Oil Co. 1.. 492
29-5- 8 Patterson, Westheimer&Daube 2 135

Wells completed 9
Production 1467
Dry 2
Gas 2
Gas production 17,250,000

KIOWA COUNTY

25-7-16w Zacharias, Connor & Son 1.. dry
26-7-16w Geis, Connor & Son 1..... dry
16-6-16w School, Malernee & Ketch 1.. dry
18-6-16w Fuqua, Alexander et al 3..... dry
29-6-16w Prough, Head & Amphlett 1. dry
17-5-14w Jones, Russell & Sloan 1.... dry
19-6-16w Ditmar, J. E. Bickett 1..... gas
6-6-18w Terry, Muth Brothers 1..... dry
18-6-16 Ditmer, Stahl & Burris 1.... 8
33-7-17w Brazil, S. B. Cloys 1..... dry

Wells completed 10
Production 8
Dry 8
Gas 1
Gas production 1,000,000

MUSKOGEE COUNTY

31-15-15 Mason, E. A. Hutchinson 4.. dry
17-14-17 James, Joe Paul et al 5..... dry
14-14-18 Taylor, W. J. Metzger 1..... gas
21-13-19 Maher, E. A. Smith 1..... dry
20-15-15 Lovett, R. R. Brader 1..... dry
33-15-18 Hawes, Arthur Oil Co. 20 .... dry
2-14-18 Callahan, A. Tillman et al 3-A dry
18-14-18 Collins, Decius & Garrett 1... 30
7-15-15 Friday, Mack Drilling Co. 2.. dry
10-14-17 Jackson, M. S. Musselim 1... dry
3-15-15 Simmons, Bryan Pet. Co. 1-A .. 25
2-14-19 Thompson, J. A. Evans 1.... dry
11-14-19 Hibb, J. A. Evans 1..... dry
Timberlake, J. A. Routt 1.... dry
25-12-19 Pettit, Colton & Lester 1... dry
17-15-17 Monday, H. E. Williams 1-A.. dry

Wells completed 16
Production 55
Dry 13
Gas 1
Gas production 500,000

OSAGE COUNTY

29-28-11 The Texas Company 1 ..... dry
33-25- 6 Phillips Pet. Co. 1..... dry
30-25- 8 The Texas Company 6..... 190
36-22- 8 L. G. Stanley 6..... 120
4-20- 9 H. H. Mundy 2..... dry
4-23- 9 Tidal Osage Oil Co. 2..... 1
32-23- 9 I.T.I. Oil Co. 404..... dry
24-23- 9 Carl T. Matthews 1..... 5
1-23-11 Silurian Oil Co. 1..... dry
5-20-11 Pioneer Pet. Co. 9-B 20
30-29- 8 Superior Oil Corp. 1..... dry
16-28- 8 I.T.I. Oil Co. 1..... 10
36-22- 8 Mid-Kansas Oil Co. 6 80
14-21- 8 L. G. Stanley et al 1..... dry
31-21-10 Devonian Oil Co. 1..... 15
15-20-10 Mid-Continent Pet. Corp. 1... dry
26-26- 8 I.T.I. Oil Co. 1..... dry
15-24- 8 McCune & Wormser 12..... 10
31-24- 9 Stoner Bros. 3..... 5
10-21- 8 H. H. Mundy et al 1..... 6
13-21-11 Okla. Natural Gas Corp. 1,674 dry
4-20- 9 H. H. Mundy et al 1..... dry
34-27- 6 Kewanee O.&G. Co. 9..... 10
33-26- 6 Carter Oil Co. 1..... dry
Carter Oil Co. 3..... dry
Carter Oil Co. 2..... dry
28-24- 9 Peters Pet. Co. 2 ..... dry
24-24- 8 Tidal Oil Co. 1..... 5
28-23- 9 Nath Jones et al 1..... dry
8-22- 8 Harry McGill 1..... dry
33-22-11 W. C. Elliott 1..... 40
30-25- 8 The Prairie O.&G. Co. 4..... 180

Wells completed 32
Production 697
Dry 17

PAWNEE COUNTY

35-20-9 Superior Oil Corp. et al 1..... dry
15-20-6 Brandt, Shaffer O.&R. Co. 3..... dry
26-20-9 Copeland, Devonian Oil Co. 1. 175
35-20-9 Wiggs, Roy Sears et al 1-A.. 125
25-21-8 Thomas, Peter Adamson 4.... 40
33-22-5 Buffalo, Washoma O.&G. Co. 1 10
35-20-9 Smelser, Swift & Rush 1-A..... 250

Wells completed 7
Production 600
Dry 2

OKFUSKEE COUNTY

29-12-10 Fixico, C. L. McMahon et al 1 55
29-11-11 Holmes, J. J. Schock 1-A..... 15
1-10-11 Sullivan, W. L. Umbrum 2.... dry
4-11-11 Morran, B.&B. Drlg. Co. 1.... dry
12-10-11 Micco, Atlantic O.P. Co. 2.... 5
24-11-10 Barnett, Barnsdall Oil Co. 1.. dry
2-10-11 Tiger, W. L. Umburn&Atl. Co. 7 20
29-12-10 Miracle, The Prairie O&G 1.. 800

Wells completed 8
Production 895
Dry 3

OKMULGEE COUNTY

9-14-12 Sneed, R. E. Garrett 1..... dry
15-13-12 Shelton, Shelden Oil Co. 4.... 40
22-13-14 S. Fox, Aiken Oil Co. et al 10 15
6-15-12 Fish, Wentz & Campbell et al 1 dry
30-15-13 Pigeon, J. M. Buzzard 1..... dry
10-15-14 B. Carter, Lavery & Farrell 2. dry
20-16-14 Bruner, Trout Drilling Co. 1.. dry
12-15-14 Scott, Goodman et al 1-A..... dry
10-11-12 Roger, Moffett et al 1..... gas
20-15-13 Prince, Kirkland & Son 1-A.. 12

Wells completed 10
Production 67
Dry 6
Gas 1
Gas production 3,500,000

PONTOTOC COUNTY

29- 5-5 Boley, Ogg & Hill et al 1.... 90
1- 4-7 Ritchie, Homaokla Oil Co. 2.... 40
15- 4-7 Gann, Hughes et al 2..... 10
18- 5-5 Jones, American O.&R. Co. 2.. dry
31- 5-5 Bumpers, LaSalle Oil Co. 2.... 45
13-14-7 Bowlin, Wilcox Oil & Gas Co. 1 dry

Wells completed 6
Production 185
Dry 2

POTTAWATOMIE COUNTY

7-8-5 Bcurassa, Gypsy Oil Co. 5.... 20
18-8-5 Harding, Independent O&G 5.. 2765
Linger, Skelly O & Marg. O 2 480
Linger, Skelly O. & Marg. O. 3 425
19-8-5 Hudson, Phillips Pet. Co. 3.... 470
Davis, Sunray O. & Cal-Cul O. 1 dry
26-7-4 Cherry, Magnolia Pet. Co. 2.... 350
Cherry, Magnolia Pet. Co. 3.... 12
18-7-5 Nesbit, Sinclair O.&G. Co. 2.... 285
21-7-5 Smith, Shell Pet. Corp. 2..... dry
30-7-5 Tolon, Shaffer O.&R. Co. 4.... 205
18-8-5 Campbell, Prairie O.&G. Co. 5.. 350
Campbell, Prairie O.&G. Co. 6.. 375
1-8-4 Hallum, Amerada Pet. Corp. 2.. 80
6-8-5 Lewis, Sinclair O.&G. Co. 1.... 25
Lewis, Sinclair O.&G. Co. 2.... dry
8-8-5 Gossland, Amerada Pet. Corp. 2 25
18-8-5 Lindley, Pure Oil Co. 5..... 475
Everetts, Marland Oil Co. and Shell Pet. 1 1465
Billington, Laurel Oil Co. 2.. 1120
Miller, Gypsy Oil Co. 5..... 62
20-8-5 Villines, T. B. Slick and White Eagle O. & R. 1 115
36-7-4 School land No. 75, Magnolia Pet. Co. 1 ..... dry
23-7-4 Carson, Independent O. & G. 2.. dry
26-7-4 Cherry "B", Magnolia Pet. 2.... 50
Roseman, Gypsy Oil Co. 1..... 1587
Smith, Tidal Oil Co. 1..... dry
20-7-5 C. Youts, Magnolia Pet. Co. 3.. 23
1-8-4 Hallum, Amerada Pet. Corp. 4.. 4820
12-8-4 Rooker, Magnolia Pet. Co. 1.... dry
Dunn, Tidal Oil Co. 3..... 130
6-8-5 Lewis, Sinclair O. & G. Co. 3... 160
7-8-5 Calvin, Amerada Pet. and Marland Oil 1 ..... dry
N. Wiley, Pure Oil Co. 1..... dry
Colvin, Twin State Oil Co. 2.... 370
8-8-5 Billington, Magnolia Pet. Co. 1.. 35
8-8-5 Billington, Magnolia Pet. Co. 3.. 64
Wiley, Shell Pet. Corp. 1..... dry
29-7-5 Church Yard, Seminole Pet. 1.. 260
6-8-5 Bebee, Pure Oil Co. 1..... dry
7-8-5 Calvin, The Texas Co. 6 340
8-8-5 Gossland, Amerada Pet. Corp. 3. 155
Wiley, Shell Pet. Corp. 2..... dry
17-8-5 Wallace, Amerada Pet. and Barnsdall Oil 2 255
18-8-5 Billington, Laurel Oil Co. 3.... 2400
Shelton, Mid-Continent Pet. 1... 225
Lindley, Pure Oil Co. 7..... 10
Lindley, Pure Oil Co. 8..... 51
19-8-5 Bellars, Sinclair O. & G. Co. 9.. 235
Bellars, Sinclair O. & G. Co. 10. 589
13-7-4 Cloude, Superior Oil Corp. 2.... 100
24-7-4 Freid, Westheimer & Daube 7.. dry
25-7-4 Smith, McCulloch Oil Co. 6..... 270
7-7-5 Brandenburg, Sinclair O. & G. 1.3200
18-7-5 Woodard, I. T. I. O. Co. and Sinclair O. & G. Co. 1 130
Brandenburg, Magnolia Pet. Co. 3 993
Nesbit, Sinclair O. & G. Co. 3...5960
Nesbit, Sinclair O. & G. Co. 4...2085
20-7-5 C. Youts, Magnolia Pet. Co. 4.... 10
33-7-5 Livingston, Shell Pet. Corp. 1... dry
12-8-4 Hartman, Gypsy Oil Co. 1..... dry
7-8-5 Fehlig, Amerada Pet. Corp. 3... dry
7-8-5 Calvin, The Texas Co. 2..... 600
7-8-5 Calvin, The Texas Co. 7..... 265
8-8-5 Billington, Magnolia Pet. Co. 4. 45
18-8-5 Linger, W. B. Pine 1..... 230
Linger, Skelly Oil and Margay Oil 4 200
Shelton, Mid-Continent Pet. 2... dry
19-8-5 Hudson, Phillips Pet. Co. 5..... 225
Urbanskey, Pure Oil Co. 1.... 76
19-7-4 Neghnguit, Continental Oil Co. 1 dry
24-7-4 Blandin, Sinclair O. & G. Co. 1 30
7-7-5 Brandenburg, Sinclair O. & G. 2 515
18-7-5 Brandenburg, Magnolia Pet. 2.. 600
Nesbit, Sinclair O. & G. Co. 6.. 440
12-8-3 Sailor, Prairie O. & G. Co. and Slick 1 ..... dry

Wells completed 76
Production 36,777
Dry 19

SEMINOLE COUNTY

13- 9-5 Gillim, Carter Oil Co. et al 2.. dry
Wisner, Gypsy Oil Co. 2..... dry
Gillim, Magnolia Pet. Co. 3.... dry
6- 9-6 Shepard, Skelly Oil Co. 4..... 535
11- 8-5 Coker, Barnsdall Oil Co. 7..... 605
Cluck, Empire O. & R. Co. 3..2030
Harjo, Sinclair O. & G. Co. 2.. 685
14- 8-5 Fife, Gypsy Oil Co. 2..... 50
6- 8-6 N. Barkus, Gypsy Oil Co. 4.... 830
7- 8-6 Harjo, C. L. McMahon et al 2. 667
Neal, Minnehoma Oil Co. 2.... 150
Herndon, Shell Pet. and Marland Oil 2 ..... dry
20- 8-7 Davis, McCulloch Oil Co. 1.... dry
32- 8-7 Jeffries, Shell Pet. Corp. 1.... 8
26- 7-6 Factor, Carter Oil Co. 2..... gas
Reed, Independent O. & G. and Sands Pet. 1 ..... gas
6- 8-6 Melton, Prairie O. & G. Co. 3.. dry
7- 9-6 Routt, Prairie O. & G. Co. 1... dry
11- 8-5 Billington, Prairie O. & G. 3..1230
33-10-6 Saloche, Mid-Cont. Pet. Corp. 6 230
13- 9-5 Anderson, Empire O. & R. and Marland 2 ..... dry
13- 9-5 S. Davis, Carter Oil Co. 3..... 340
Gillim, Magnolia Pet. Co. 2...3160
Gillim, Carter Oil Co. et al 3.. 200
11- 8-5 Coker, Barnsdall Oil Co. 3..... 927
14- 8-5 Mimey, Gypsy Oil Co. 1..... dry
5- 8-6 Mission, Gypsy Oil Co. 2..... 210
6- 8-6 N. Barkus, Gypsy Oil Co. 2.... 425
7- 8-6 S. Barkus, Gypsy Oil Co. 2.... 235
18- 8-6 Fuswa, Carter Oil Co. 1..... 230
32- 8-7 Jeffries, Shell Pet. Corp. 2.... dry
11- 7-6 Janey, The Texas Co. 3..... 250
13- 7-6 Tiger, Snowden & McSweeney 3 dry
24- 7-6 Brinson, Pure Oil Co. 3..... 400
5- 7-7 Smith, Mid-Cont. Pet. Corp. 3..2770
13- 9-5 Anderson, Empire O. & R. and Marland Oil 1 832
34-11-7 E. Mill, Phillips Pet. Co. 1.... dry
9- 8-6 Vanbuskirk, Magnolia Pet. 4.... 53
27- 7-6 Carpenter, Independent O. & G. Co. 1 1370
7- 5-8 M. Harjo, Sunray Oil Co. 1.... dry
18- 5-8 Lucy, The Texas Co. 8..... 550
13- 9-5 Hyde, Magnolia Pet. Co. 4.... 2869
1- 8-5 Lawson, Independent O. & G. 5 865
11- 8-5 Coker, Barnsdall Oil Co. 5..... 613
Cluck, Empire O. & R. Co. 2.. 382
Cluck, Empire O. & R. Co. 4..1261
Bean, Sinclair O. & G. 1..... 780
14- 8-5 Killing, Magnolia Pet. Co. 2.... dry
Fife, Gypsy Oil Co. 1..... dry
5- 8-6 Rice, Amerada Pet. Corp. 2.... 610
6- 8-6 Harjo, W. B. Pine 2..... 980
6- 9-6 James, Prairie O. & G. Co. 5.... dry
35- 9-6 Franks, Prairie O. & G. Co. 1.. 455
7- 9-6 Routt, Prairie O. & G. 1..... dry
11- 8-5 Billington, Prairie O. & G. 5... 580
13- 9-7 Cyrus, Burke Greis Oil Co. 1... dry
2- 8-5 Coker, Carter Oil Co. 1.....3735
7- 8-6 Doser, Gypsy Oil Co. 3..... 295
Maines, Marland Oil Co. 3.... 61
32- 8-7 Lacke, Marland Oil Co. 1..... dry
26- 7-6 Glass, Magnolia Pet. Co. 1.... gas
26- 7-6 Factor, Carter Oil Co. 1..... dry
22-10-7 Chisholm, Prairie O. & G. Co. and Slick 1 ..... dry
6- 9-6 Campbell, Prairie O. & G. Co. and Slick 6 360
4- 7-7 Mulcussy, Prairie O. & G. Co. and Slick 1 ..... dry
24- 9-5 Baker, Prairie O. & G. Co. 4.... 370
11- 8-5 Billington, Prairie O. & G. Co. 7 940

Wells completed 67
Production 34,069
Dry 22
Gas 3
Gas production 91,500,000

STEPHENS COUNTY

33-2 -5w West, Magnolia Pet. 1..... dry
13-1s-9w School land No. 4, Magnolia Pet. Co. 1 ..... dry
36-1s-8w Woodhouser, Pace et al 1.... dry
12-1s-4w Taylor, Atlantic O. P. Co. 2.. 125
24-1s-4w Rivire, Magnolia Pet. Co. 2... dry
2-2s-8w Medley, Pace et al 1..... 28
36-2s-5w Baker, Pelwin Oil Co. 1..... dry
34-1s-8w Kagay, Magnolia Pet. Co. 19.. 25
34-2 -9w Brigham, E. J. Stump 1..... dry
32-1 -8w Speers "B," Coline Oil Co. 2.. dry
34-1s-8w Simpson, Lone Eagle Oil Co. 3 17

16-1s-5w Stephens, Lundy & Denton 1 gas
24-1s-4w McCullom, Harris & McNeil 1 28
24-2s-3w McMasters, Pace et al 1..... 250
17-2s-7w Petty, Pace et al 1..... dry
2-2s-8w Gilworth, Ven-Mex and Mid-Continent Oil 2 15
12-2s-8w McMasters, Pace et al 3..... 75
18-2s-7w Bristowe, Pace et al 1..... 35
26-3s-8w Simmons, E. J. Stump 1..... dry
2-1 -7w Jefferson, Stahl & Burris 1... dry
33-1s-3w Stevens, Magnolia Pet. Co. 10 dry
24-1s-3w Nigh, American Pipe Line 4. 100
24-1s-4w McCullom, Harris & McNeil 1 28
12-2s-8w Peck, Magnolia Pet. Co. 3.... 42
16-2s-7w Cooper, Pace et al 1..... dry
5-2s-4w Fee, Davidson et al 1..... dry
25-1 -9w Thomas, Magnolia Pet. Co. 7. dry
19-1s-8w Adams, Fossett et al 3..... dry
24-1s-3w Kagay, Magnolia Pet. Co. 21.. 65
13-1s-4w Davidson, Clark & Cowden 3. 59

Wells completed 30
Production 890
Dry 15
Gas 1
Gas production 4,000,000

WAGONER COUNTY

24-16-17 Ford, F. L. Beam et al 1..... dry
31-18-15 E. Sarty, H. C. Deems 12..... dry
21-18-17 Hosmer, McCracken et al 5... dry
12-17-17 Holman, Keener Oil Co. 4..... dry
34-18-17 Barnett, Horner et al 2..... gas
22-16-19 Woffard, C. F. Finefield 1..... dry
14-14-14 Colbert, J. E. Wallace 12..... 12
6-14-15 Connor, J. L. Selby 11..... 10
22-18-17 Cinda, Okla. Nat. Gas Corp. 4 dry
14-16-17 Barnes, Chicago Drlg. Synd. 2 dry

Wells completed 10
Production 22
Dry 7
Gas 1
Gas production 1,200,000

MISCELLANEOUS COUNTIES

Blaine County—
26-15-12w Dickens, W. J. Donley 1..... dry
Caddo County—
11-5-9w McKenna, Magnolia Pet. Co. 1. 35
Cotton County—
3-2s-10w Priddy, Perkins & Cullum 6 dry
16-4s-12w Thomas, Guiler & Dyson 1.. dry
24-1s-10w Urich, Scott & Arington 1... 17
26-3s-11w Conklin, Consolidated Oil 1.. dry
24-1s-10w Smith, Cullum & Jenkins 4. dry
24-1s-11w Indian, Shasta Oil Co. 1..... dry
26-4s-13w Hall, Everetts Oil Co. 1..... dry
Garvin County—
8-1-3w Derdeyn, T. P. C. & O. Co. 4.. 40
14-1-3w Pierce, Magnolia Pet. Co. 1.... 9
Grady County—
2-4-5w Woods, Meridian Gas Co. 4..... gas
Grant County—
7-28-1w Gibson, R. A. Gibson 1..... dry
Lincoln County—
13-15-5 Tipton, Mid-Continent Pet. 1... dry
Jefferson County—
34-6s-5w Seay, O. V. Beck 1-A..... 75
Haskell County—
32-9-21 Hurst, Sans Bois Gas Co. 1..... dry
Logan County—
18-19-4w Weber, Sinclair O. & G. Co. 4. dry
22-18-4w Jewel, Gypsy Oil Co. 1..... dry
McClain County—
22-5-3 James, Mid-Continent Pet. 1.... dry
Nowata County—
5-25-16 Fee, E. C. Cramer 5..... 6
Payne County—
25-19-4 Myatt, Shaffer O. & R. Co. 1.. dry
3-17-6 Anderson, Prairie O. & G. Co. and T. B. Slick 1..... dry
Pittsburg County—
23-7-17 Hughes, Quinton Spelter Co. 1 gas
Rogers County—
31-23-17 Smith, Fera Fellis Inv. Co. 1 20
9-21-17 Williams, Ross & Smith 1.... 1
Tulsa County—
36-19-11 Franklin, William Wood Synd. 5 ..... dry
Washington County—
9-27-13 Fowler, Keystone O. & G. Co. 6 1
Fowler, Keystone O. & G. Co. 7 1

Wells completed 28
Production 205
Dry 16
Gas 2
Gas production 12,500,000

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	17	1,588	6	0
Cowley	25	1,355	14	4
Greenwood	21	1,880	6	0
Sedgwick	48	22,918	13	0
Miscellaneous	48	815	30	7
Total April	159	28,556	69	11
Total March	31	4,642	14	2
Difference	128	23,914	55	9

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Butler	9	21	30
Cowley	4	33	37
Elk	2	17	19
Ellis	2	11	13
Greenwood	2	17	19
Harvey	3	12	15
McPherson	3	9	12
Marion	3	20	23
Russell	2	7	9
Sedgwick	15	75	90
Sumner	3	9	12
Woodson	2	10	12
Miscellaneous	12	60	72
Total April	62	301	363
Total March	61	306	367
Difference	1	5	4

WELLS COMPLETED
BUTLER COUNTY

31-24-4 Maxwell, Maxwell Oil Co. 3..... 15
4-26-6 Adams, Skelly Oil Co. 1..... dry
14-27-5 Morgan, Henderson & Holden 2. dry
10-27-6 Marshall, Rosenthal et al 2..... 200
Marshall, Dixie Oil Co. 5 ..... dry
17-27-7 Eckel, Billy Wentz 1 ..... dry
27-27-5 R. Sherrock, Empire O. & R. Co. 6 45
R. Sherrock, Empire O. & R. Co. 8 275
Hutchinson, Empire O. & R. Co. 6-B 150
19-26-5 Koogler, Empire O. & R. Co. 75 200
20-26-5 Koogler, Empire O. & R. Co. 225
22-27-5 Brandenberger, Empire O. & R. Co. 5-A 175
9-27-6 McGinnis, Allison & Fitzwilliams 6 50
11-27-5 Marshall, Patten et al 1..... 53
12-27-5 Morgan, Martle O. & G. Co. 1.. dry
27-27-5 Sherrock, Empire O. & R. Co. 7 200
8-25-7 Teeter, Ed Schreck & Jim Lilly 1 ..... dry

Wells completed 17
Production 1588
Dry 6

COWLEY COUNTY

22-31-3 Schmidt, E. B. Shawver et al 1 dry
21-31-4 Hittle, Trees Oil Co. 4 120
21-31-4 Hittle, The Texas Company 5.. 100
19-31-5 Clabough, Barnsdall Oil Co. 1.. dry
20-31-5 Bement, Roth & Faurot 1 ..... gas
30-31-6 Pierce, Lewis Prod. Co. 2 10
22-32-4 Wilcoxson, Roth & Faurot 1 ..... gas
4-32-5 McErwin, Krow White Oil Co. 1 dry
19-32-5 Bartlow, J. A. Hull 5 125
31-32-6 Kidings, Roth & Faurot 1 .... dry
8-33-3 Jennings, Gypsy Oil Co. 1 200
7-34-3 Kemp, Barnsdall Oil Co. 1 .... dry
13-34-6 Sillillsman, Kentucky N. & O. Co. 2 ..... dry
10-31-3 Stout, Shawver and Marland Oil 1 ..... dry
17-30-3 Plummer, Broadwater Drlg. Co. 1 ..... dry
25-31-4 Franks, White Eagle et al 1 .. dry
36-21-4 Smith, Barnsdall Oil Co. et al 1 dry
30-31-6 Sitton, Lewis Prod. Co. 1 ..... dry
12-32-6 Manser, Trees Oil Co. 1 ..... gas
21-30-4 Boeger, Dutton & Gillespie 1 .. dry
19-33-6 Jarvis, T. C. Johnson and Shell Pet. 1 ..... dry
9-35-4 Lundstrom, Pyle & Sutter 1 .... dry
9-32-4 Youle, The Prairie O. & G. Co. 3 400
Youle, The Prairie O. & G. Co. 4 gas
Youle, The Prairie O. & G. Co. 2 400

Wells completed 25
Production 1355
Dry 14
Gas 4
Gas production 10,250,000

GREENWOOD COUNTY

25-22-12 Ott, Empire O. & R. Co. 12-A.. 50
29-22-13 Luthi, Amerada Pet. Corp. 6.. 75
11-23- 9 Green, Chriss Sheedy et al 10.. 125
21-23-11 Edwards, The Texas Company 2 450
4-23-13 Inthurn, Haverhill Pet. Co. 18 35
33-24- 9 Marshall, Ritchie & Moore 1.. dry
7-24-11 Gaffney, Henderson & Holden 3 dry
15-24-12 Moran, Parrish et al 1 ..... dry
12-25-12 Grossarth, Sheedy et al 1 .... dry
28-26- 9 Olson, Reed & Wilson 3 ..... gas
2-22-10 Sheperd, Independent O. & G. Co. 8 60
Sheperd, Independent O. & G. Co. 10 255
5-22-11 Klasser, Garden & Stats 1..... dry
23-22-11 Sheets, Shell Pet. Corp. and Swartz 4 80
29-22-13 Luthi, Simmons & Rhodes 4.. 30
12-23- 9 Green, Sheedy et al 3-B 20
21-23-11 Edwards, Empire O. & R. Co. 12 375
11-22-10 Sheperd, Independent O. & G. Co. 11 200
14-24-12 Wayham, Mid-Continent Pet. Corp. 14 25
2-25-10 Miller, Rockhill & Taylor 1 .. dry
7-24-11 Gaffney, The Prairie O. & G. Co. 4 100

Wells completed 21
Production 1880
Dry 6
Gas production 1,000,000

SEDGWICK COUNTY

1-26-1w Wilson, Davis & Skelly Oil Co. et al 1 550
6-26-1 T. Goodrich, Bu-Vi-Bar Pet. et al 1 512
Emerich, Bu-Vi-Bar Pet. et al 1 1135
Bright "B," Bu-Vi-Bar Pet. et al 1 812
Branch, Bu-Vi-Bar Pet. et al 1.1411
24-29-1 Thurley, McCulloch Oil Co. et al 1 ..... dry
6 29-2 Goeldner, Tatlock and Roxana Pet. 1 ..... dry
1-26-1w Wilson, Davis, Skelly Oil Co. et al 2 225
24-25-1 Samuels, Barnsdall Oil Co. 1.. 75
31-25-1 Whiting, Brandebury & Hinkle 1 ..... dry
31-25-1 Ramsey, Derby Oil Co. 1 ..... dry
Caldwell, Geo. L. Miller et al 1 dry
Kehle, Shawver & Dickey 1 .. dry
36-25-1w Smyser, The Prairie O. & G. Co. 2 214
6-26-1 Bright "A," Bu-Vi-Bar Pet. Corp. et al 1 100
Brown, Jones et al 1 ..... dry
Fitch, Mary Jane Oil Co. 2 ..1225
Pfeffer, Phillips Pet. and The Prairie 1 220
7-26-1 Byers, Bu-Vi-Bar Pet. Corp. et al 1 340
Shawver, Bu-Vi-Bar Pet. Corp. et al 2 1285
7-26-1 Woodman, Stearns & Streeter 1 1412
1-26-1w Wilson, Davis and Skelly Oil et al 3 250
1-26-1w Difford, Phillips Pet. Co. 3 .. 275
Difford, Phillips Pet. Co. 2 .. 220
6-27-1w Faber, Barnsdall Oil Co. 1 .. dry
19-28-1 Reeves, Shawver et al 1 ..... dry
22-25-1 Burnham, H. H. Patton et al 1 dry
6-26-1 Lavender, Montour Oil Co. 1..1200
Gorman, Darby Oil Co. 1 1265
T. Goodrich, Bu-Vi-Bar Pet. Corp. 2 270
Branch, Bu-Vi-Bar Pet. Corp. 2 1125
Kelly, Allison & Fitzwilliams 1 145
Caldwell, Sutter & Pyle 2 1045
Nissen, Vickers Pet. Co. 2 750
Nissen, Vickers Pet. Co. 1 740
Scherger, Tidal Oil Co. 1 275
Boyer, White Eagle O. & R. Co. 1 350
7-26-1e Shawver, Bu-Vi-Bar Pet. Corp. et al 1 1800
1-26-1w Wilson, Skelly Oil Co. et al 5.1120
27-25-1w Cross, The Prairie O. & G. Co. 1 12
36-25-1w School lot, Plains Oil Co. 1 .. 75
36-25-1w Whittaker, Robinson et al 1.. dry
Fulkerson, John Rogers 1 .... dry
1-26-1w Difford, Phillips Pet. Co. 1 .. 170
7-26-1 Roll, Bu-Vi-Bar Pet. Corp. et al 1 1150
6-26-1 Scherger, Tidal Oil Co. 2 350
Caldwell, Sutter & Pyle 1 815
19-25-1 Nagel, Bu-Vi-Bar Pet. Corp. 1 dry

Wells completed 48
Production 22,918
Dry 13

MISCELLANEOUS COUNTIES

Chautauqua County—
12-32- 9 Hilton, Elmwood Oil Co. 3 .. dry
2-32-10 Julian, Griffin & Bell 2 45
34-33-12 Romig, Denman Bros. 2 ..... gas
33-33-12 Mullendore, Jas. O'Neil Bruen 5 15
27-33-12 Romig, Denman Bros. 3 ..... gas
Coffey County—
29-21-14 Hollern, Nathan et al 1 ..... dry
9-22-14 Read, Union Gas Co. 1 ..... dry
Barber County—
12-33-13w Lytle, Barbara Oil Co. 1 .. gas
Franklin County—
17-16-18 Owens, Smith, Trice & Fisher 1 dry
Jefferson County—
13-9-19 Edwards, Northern Counties O. & G. 1 ..... dry
Labette County—
1-33-17 Hornback, Crowell et al 1 ... dry
Nemaha County—
19-3-11 Myers, Nemaha O. & G. Co. 1.. dry
Osage County—
3-15-15 Lewis, Baker et al 1 ..... dry
27-15-16 Bailey, West et al 1 ..... dry
8-17-17 Neil, Mull-Vi Dev. Co. 1 ..... dry
34-18-14 Evans, Papoose Oil Co. 1 .... dry
Pottawatomie County—
11-10-12 St. Marys, J. J. Crawford 1 .. dry
Wabaunsee County—
24-11-10 Jones, Doric Oil Co. 1 ..... dry
15-13-12 Henderson, Eskridge Oil Co. 1. dry
Wilson County—
29-30-17 Smally, West & Williams 1 .. dry
Ellis County—
21-12-19w Wann, Empire O. & R. Co. 1 dry
34-14-17w Brull, Phillips Pet. Co. 1 .. dry
19-15-16w Urban, Labette Oil Co. 1 .... dry
Harvey County—
21-24-2 Neiman, R. S. Austin and Tidal Oil Co. 1 ..... dry
11-23-2w Houry "B," Shell Pet. Corp. 1. gas
Russell County—
29-11-15w F. Booth, Midwest Exp. Co. 4 25
5-14-15w Mermas, Midwest Exp. Co. 1 60
30-12-15w Austin, Midwest Exp. Co. 31. 150
31-13-15w Polcyn, Empire O. & R. Co. 1 100
32-13-15w Baxter, Midwest Exp. Co. 22. 75
5-14-15w Dortland, Midwest Exp. Co. 22 30
32-13-15w Mermas, Keys Pet. Co. 7 .. dry
Rush County—
9-16-16w Beeching, Sinclair O. & G. Co. 1 ..... dry
Woodson County—
31-24-15 Mabe,Fisher & Lauck 1 ..... dry
23-26-14 Lauber, Peerless Oil Co. 11 .. 200
Lauber, Peerless Oil Co. 12 .. dry
Montgomery County—
32-33-15 Anderson, Hydraulic Oil Co. 9. 25
Anderson, Hydraulic Oil Co. 10 dry
18-33-15 Erhart, Central Oil Co. 1 .... dry
Neosho County—
29-27-19 Rush, John Spielman 1 ..... gas
Barton County—
11-16-15w Karst, Midwest Exp. Co. 34.. dry
Elk County—
19-28-12 Stewart, Waggoner & Spencer 1 ..... dry
13-29- 9 Dunlap, McCulloch Oil Co. 1.. dry
McPherson County—
32-18-2w Chindberg, The Texas Company 1 ..... dry
Stevens County—
10-33-38w Hamm, McKeena et al 1 ... gas
Sumner County—
16-35-2 White, Morgan Carey et al 1 .. gas
23-34-2 Mireau, Harris & Haun 1 ..... dry
Rooks County—
11-9-16w Tatkenhorst, Krueger et al 2.. dry

Wells completed 48
Production 815
Dry 30
Gas 7
Gas production 79,350,000

PANHANDLE FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carson	5	1,312	0	1
Gray	14	2,350	3	1
Hutchinson	4	285	0	0
Moore	3	305	0	1
Motley	1	0	1	0
Wheeler	15	130	2	12
Total April	42	4,382	6	15
Total March	32	9,427	3	6
Difference	10	5,045	3	9

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	S.D.	Ttl.
Carson	3	13	3	19
Gray	13	37	9	59
Hutchinson	2	15	4	21
Moore	1	9	1	11
Wheeler	4	7	3	14
Miscellaneous	4	12	11	27
Total April	27	93	31	151
Total March	26	93	25	144
Difference	1	0	6	7

WELLS COMPLETED
CARSON COUNTY

McConnell, Champlin Ref. Co. 2..... 480
McConnell, Prairie O. & G. Co. 3..... 172
Schafer, Skelly Oil Co. 12..... 355
Noel, Delmar Oil Co. 3..... 305
Hedrick, Skelly Oil Co. ..... gas

Completions 5
Production 1312
Gas wells 1

GRAY COUNTY

Johnson, Purple Sage Oil Co. 2..... dry
Taylor, Malone et al 1..... dry
Bull, McIlroy Oil Co. 2..... 18
Williams, Danciger et al 1..... dry
Sullivan, Schwald et al 1..... 800
Johns, Phillips Pet. Corp. 5..... 180
Shaw, Danciger et al 1..... 300
Gethings, Parton & Holts 1..... gas
Key, The Texas Co. 1..... 155
McConnell, Shell Corp. 2..... 85
McConnell, Southern Pet. Exp. 3..... 305
Davis, The Texas Co. 6..... 82
Combs-Worley, Wilcox-Pampa 4..... 400
Clay, Empire G. & F. Co. 1..... 25

Completions 14
Production 2350
Dry 3
Gas 1

HUTCHINSON COUNTY

Jasper, Phillips Pet. Corp. 2 10
Whittenburg, Phillips Pet. Corp. 16 .. 140
Sanford, Phillips Pet. Corp. 4 115
Luginbyhl, Dunnigan et al 1 20

Completions 4
Production 285

MOORE COUNTY

Sneed, Dixon Creek Oil Co. 1 ..... gas
Sneed, McMan Oil & Gas Co. 2 125
Sneed, Phillips Pet. Co. 4 180

Completions 3
Production 305
Gas 1

MOTLEY COUNTY

Tillson, Exploration Co., 1 ..... dry

WHEELER COUNTY

Purcell, Clark et al 4 ..... gas
Bently, Gibson Oil Co. 6 130
Burchman, Hartel et al 1 ..... gas
Hicks, Mudge Oil Co. 1-C ..... gas
Nelson, L. W. Rooks 1 ..... gas
Hicks-Martin, Lone Star Gas Co. 1 dry
Jones, Lone Star Gas Co. 4 ..... gas
Woodley, Swain-Miller 1 ..... gas
Woodley, Vaughn 1 ..... gas
Morgan, Angus et al 2 ..... gas
Grisbold, Edwards et al 1 ..... gas
Gordon, Texas Corp 1 ..... gas
Adamson, Wichkampers 1 ..... gas
Noel, Fain-McGaha 1 ..... dry
Purcell, Johnson & Co. 1 ..... gas

Completions 15
Production 150
Dry 2
Gas 12

WEST TEXAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Concho	2	0	2	0
Crane	1	60	0	0
Crockett	3	0	3	0
Fisher	3	0	3	0
Garza	1	60	0	0
Glasscock	3	0	3	0
Howard	19	8,329	0	0
Irion	2	0	2	0
Jones	8	211	4	0
Loving	1	5,744	0	0
Mitchell	2	106	0	1
Menard	3	0	3	0
Nolan	1	0	1	0
Reagan	1	0	1	0
Tom Green	3	0	3	0
Taylor	2	0	2	0
Presidio	1	0	1	0
Pecos	13	51,746	5	0
Runnels	4	0	4	0
Ward	1	60	0	0
Winkler	14	62,162	0	0
Total April	88	128,478	37	1
Total March	110	199,751	33	1
Difference	22	71,273	4	0

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	S.D.	Ttl.
Crane	1	3	0	4
Crockett	0	2	6	8
Fisher	0	8	3	11
Glasscock	0	3	2	5
Howard	4	25	6	35
Jones	6	14	2	22
Mitchell	0	4	3	7
Pecos	10	16	10	36
Reagan	2	12	2	16
Runnels	0	5	2	7
Upton	0	3	1	4
Ward	2	5	1	8
Winkler	6	33	15	54
Miscellaneous	6	40	35	81
Total April	37	173	88	298
Total March	53	192	88	333
Differenc	16	19	0	35

WELLS COMPLETED
CRANE COUNTY

Waddell, Gulf Prod. Co. 6..... 80
CROCKETT COUNTY
Todd, Moncrief et al 2..... dry

Todd, Moncrief et al 3 ..... dry
Weatherby, Tidal Oil Co. 1 ..... dry

Completions 3
Dry 3

CONCHO COUNTY

Lovelace & Lockett, Duffey & Silk 1 ..... dry
Hartgrove, Explin. Co. 2 ..... dry

Dry 2
Completions 2

FISHER COUNTY

Decker, Midwest Oil Co. 1 ..... dry
Decker, Midwest Oil Co. 2 ..... dry
Mayberry, Raney Oil Co. ..... dry

Completions 3
Dry 3

GARZA COUNTY

Boren, Emerald Oil Co. 4 60

GLASSCOCK COUNTY

Dunbar, White Eagle Oil Co. 1 ..... dry
Mann, Gibson & Johnson 1 ..... dry
Underwood, McCreath & Suggetts 1 ..... dry

Completions 3
Dry 3

HOWARD COUNTY

Merrick & Bristows, Hooks 10 80
Settles-C, American Maracaibo Co. 4 2064
Roberts, Coyle & Concord 6 60
Settles-A, Group One-Marland 4 744
Roberts-E, Moody Oil Corp. 10 200
Overton, Group One and Marland 1 240
Roberts, Magnolia Pet. Co. 18 80
Chalk, Marland Oil Co. 4 176
Chalk-C, Midwest Oil Co. 3 180
Clay, Comet Oil Co. 3 60
Roberts, Amerada Pet. Corp. 7 350
Roberts, Amerada Pet. Corp. 8 144
Roberts, Cosden & Co. 3-C 360
Settles Group One and Marland Oil 7 800
Clay-H. Marland Oil Co. 3 60
Roberts, Merrick & Bristow 8 1476
Roberts-E, Moody Oil Corp. 10 225
Roberts-A, Schermerhorn Oil Co. 5 200
Kloh-Rumsey, Witherspoon et al 2 830

Completions 19
Production 8329

IRION COUNTY

Stock, Pecos Valley Oil Co. 1 ..... dry
Tankersley, Sun Oil Co. 1 ..... dry

Completions 2
Dry 2

JONES COUNTY

Brown, Cosden & Co. 1 ..... dry
Grayson-A, Roeser & Pendleton 4 95
Hoehn, Mid-Sun Oil Corp. 1 ..... dry
Bickley, Sinclair O. & G. Co. 3 ..... dry
Bickley, Annabell Oil Co. 1 ..... dry
McClanahan et al, 1 Hall 20
Bickley, Cosden & Herbert et al 6 86
Tiner, Grisham-Hunter 1 10

Completions 8
Production 211
Dry 4

LOVING COUNTY

Fee, Lockhart & Co. 1 5744

MITCHELL COUNTY

Ellwood, Simms Oil Co. 2 ..... gas
Foster, Magnolia Pet. Co. 6 106

Completions 2
Production 106
Gas 1
Gas production 5,500,000

NOLAN COUNTY

Martin, Root Drlg. Co. 1 ..... dry

MENARD COUNTY

Davis, J. P. Holstein 1 ..... dry
Kathman, Carpenter & Robinson 1 ..... dry
Wilhelm, Sabins & Bevans 2 ..... dry

Completions 3
Dry 3

REAGAN COUNTY

University, California Co. 5 ..... dry

TOM GREEN COUNTY

Jones, Collins et al 1 ..... dry
Fee, F. P. Green 1 ..... dry
Sharp, Lone Eagle Co. 1 ..... dry

Completions 3
Dry 3

PRESIDIO COUNTY

Fee, L. C. Brite 2 (water well) ..... dry

WARD COUNTY

Atlantic & Delmar, Hayzlett 1 60

PECOS COUNTY

Smith, Gulf Prod. Co. 14-B 50
Smith, Gulf Prod. Co. 15-B 6552
Gray, McCarty Oil Co. 1 36
Yates, McMan & Marland 10 4152
Fee, Pecos Valley Oil Co. 2 80
Bonebrake, Dibble & Hale 1 ..... dry
Blakely Marland Oil Co. 1 ..... dry
Smith, Mid-Kansas O. & G. Co. 5 220
Yates-H, Mid-Kansas O. & G. Co. 8 39576
Ramsey, Phillips Pet. Corp. 1 1060
University, Grayburg 1 ..... dry
Corder, Trees Oil Co. 1 ..... dry
Scarbaur, Southern Crude 1 ..... dry

Completions 13
Production 51746
Dry 5

RUNNELS COUNTY

Furgeson, Huff Oil Co. 1 ..... dry
Spill, Hamilton et al 1 ..... dry
Reese, Summers et al 1 ..... dry
Lawhorn, Miles Oil Co. 1 ..... dry

Completions 4
Dry 4

TAYLOR COUNTY

Campbell, Grisham-Hunter Corp. 1 ..... dry
Armour, L. H. Wentz 1 ..... dry

Completions 2
Dry 2

WINKLER COUNTY

Howe, Independent O. & G. Co. 300
Sealy, Simms Oil Co. 1 280
Hendricks, T-88-D, Southern Crude 6 2400
Hendricks, T-88-T, Southern Crude 7 42
Hendricks, Republic Prod. Co. 13 11160
Leck, Skelly Oil Co. 1 3450
Hendricks, T-88-Q, Southern Crude 2 2400
Hendricks, T-89-E, Southern Crude 1 50
Hendricks, Humble O. & R. Co. 10-C 39312
Leck, Prairie O. & G. Co. 1 2208
Hendricks, T-89-F, Southern Crude 3 150
Hendricks, T-89-H, Southern Crude 2 75
Cowden, Gulf Prod. Co. 4 250
Scarborough, Shell-Llano Oil Co. 4 85

Completions 14
Production 62162

NORTH CENTRAL TEXAS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Archer	52	911	30	0
Brown	27	238	16	3
Clay	2	64	0	0
Callahan	9	130	7	0
Coleman	24	220	16	5
Cooke	12	2,569	2	0
Eastland	13	115	7	0
Erath	4	0	2	2
Montague	4	90	2	0
Palo Pinto	2	0	1	1
Jack	5	197	3	0
Haskell	1	0	1	0
Throckmorton	1	0	1	0
Stephens	5	39	4	1
San Saba	1	0	1	0
Shackelford	34	1,417	20	0
Wilbarger	22	2,491	5	0
Wichita	20	1,075	7	0
Young	36	353	20	0
Total April	278	9,969	145	12
Total March	372	11,967	186	14
Difference	94	2,008	41	2

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	S.D.	Ttl.
Archer	11	37	5	53
Brown	5	20	12	37
Callahan	1	11	2	14
Coleman	7	24	4	35
Cooke	4	12	4	20
Clay	0	3	6	9
Eastland	5	14	4	23
Erath	5	6	3	14
Haskell	0	1	4	5
Jack	7	16	3	26
Montague	1	3	2	6
Palo Pinto	0	7	5	12
Shackelford	2	11	3	16
Stephens	1	14	2	17
Throckmorton	1	3	1	5
Wichita	14	25	7	47
Wilbarger	16	55	14	85
Young	3	12	11	26
Miscellaneous	3	8	9	20
Total April	86	282	101	469
Total March	81	294	116	491
Difference	5	12	15	22

WELLS COMPLETED

ARCHER COUNTY

Miller, L. T. Burns 1 ..... dry
Wilson-E, Fain-McGaha 1 ..... dry
Wilson-B, F. H. Gahlke 1 55
McCrary, T. Lomaz, Jr., 1 ..... dry
Kemp & Kempner, Long & Texas Co. 1 162
Wilson, Palmer & Burch 1 ..... dry
Wallace, Pandem Oil Corp. 1 67
Parrish, Rathke Oil Co. 1 22
Jackson, Shappell Oil Co. 44 30
Williams, Lea & Daniels 5 10
Anderson, Madden & Clark 1 ..... dry
Bloodworth, Moran Drlg. Co. 1 60
Richardson, Prairie Oil & Gas Co. 1 11
Richardson, Prairie Oil & Gas Co. 26 .. 55
Abercrombie & Taylor, Shell Pet. Corp. 3 12
Knight, The Texas Company et al 1 ..... dry
Harwell, A. A. Brashears 1 ..... dry
Richardson-A, Continental Oil Co. 1 ..... dry
Easterlong, Gilliland & Nosser 1 ..... dry
Hudson-B, A. P. Nicholson et al 1 ..... dry
Kunkel, Texas Unity Co 1 ..... dry
Brown, Brown Oil Co. 1 72
Turbeville, Panhandle Ref. Co. ..... dry
Turbeville, United P. Co. and The Texas Co. 1 ..... dry
Prideaux, Johnston 1 3
Huff, Wolf & Son 1 ..... dry
DeMose, Burns 1 ..... dry
Andrews, Franklin 1 ..... dry
Roach & Junker, Gilliland & Rosser & Gwynne ..... dry
Falls Co. fee, Humble Oil & Ref. Co. ..... dry
McMurtrey, Mart & Bevens 1 ..... dry
Scott, The Texas Company 1 ..... dry
Williams, Lea & Daniels 6 20
Kunkel, Magnolia Pet. Co. 1 ..... dry
Kunkel, Magnolia Pet. Co. 2 ..... dry
Barkey, McLaughlin Bros. 1 ..... dry
Scott, Moran & Independent Oil & Gas Co. et al 43
Kunkel-B, Petroleum Prod. Co. et al 1 .. 53
Abercrombie & Taylor-C, Shell Pet. Co. 12
Tarr, Consolidated Oil Co. 1 ..... dry
Wilson-B, Gahlke 2 63
Wilson-A, Johnson 6 57
Campbell, Kenrow Prod. Co. 3 ..... dry
Parrish-A, Payne et al 1 60
Wilmot, Reno Oil Co. 9 ..... dry
Jackson, Shappell Oil Co. 45 ..... dry
Chilson, C. P. Sheldon 1 ..... dry
Lyles, Jim Turner et al 5 ..... dry
Brown, United Prod. Co. 1 18
Walls, Boller et al 2 6
Bradstreet, Owens 2 ..... dry
Hamilton, Bridwell Oil Co. 1 21

Completions 52
Production 911
Dry holes 30

BROWN COUNTY

Sweet, Campbell et al 1 ..... dry
Graham, Lone & Michaels 2 ..... dry
Harrell, Pitts et al 1 ..... dry
Newton, Demont Oil Co. 1 ..... dry
Davis, Green Prod. Co. 3 ..... dry
Armstrong, Humble Oil & Ref. Co. 15 ... 75
Lewis, Murrells 1 ..... dry
Syndicate, Curry 5 5
Tervooren, Humble Oil & Ref. Co. 2 12
Davis, McClung 1 ..... dry
Fitzgerald, Royalties et al 2 ..... gas
Armstrong, Humble Oil & Ref. Co. 1 ... 50
Newton, Rosenbaum et al 1 ..... dry
Hill, Green et al 2 ..... dry
Boysen, Kerr et al 3 ..... gas
Davis, McClung 2 ..... dry
Eiland, Sheldon et al 1 ..... dry
Leatherwood, Anderson 1 25
Shield-Maddox, Butler et al 1 ..... dry
Sweet, Campbell et al 1 ..... dry
Newton, Cross Cut Corp. 1 6
Jones, Christy Breeding et al 1 ..... gas
Byler, Humble Oil & Ref. Co. 11 15
Hodnett-A, Humble Oil & Ref. Co. 21-A dry
Duff, Watten et al 1 50
Evans, G. L. Gray 1 ..... dry
Dixon, Hart & Cole 1 ..... dry

Completions 27
Production 238
Dry holes 16
Gas wells 2
Gas production 2,550,000

CLAY COUNTY

Culberson, L. L. Bains 4 4
Evans, R. T. Beitcher et al 1 60

Completions 2
Production 64
Dry holes 0

CALLAHAN COUNTY

Cavannaugh, Bradstreet & Holdens 1 ... 125
Finley-C, Moutray Oil Co. 1 ..... dry
Hatchett, Moutray Oil Co. 1-20 ..... dry
Tatum, Shaheen 2 ..... dry
Barry, Malone Bros. 1 ..... dry
McFarland, Barnhart et al 1 ..... dry
Snyder, Drew Beams 1 5
Hobbs, Breeman et al 1 ..... dry
Finley, Reiter & Foster 1 ..... dry

Completions 9
Production 130
Dry holes 7

COLEMAN COUNTY

Gates, Atlantic & Urban et al 1 ..... gas
Sharp, Guardian Oil Co. 1 ..... gas
Morris, Eastland et al 6 200
Burns, Owens 1 ..... dry
Horn, Richardson Jones et al 1 ..... dry
Sears, Dozier Brooks 1 ..... dry
Rice, Jameson et al 1 ..... gas
Pollard, Joines et al 1 ..... dry
Matlock, Samuels Howard 1 10
Robertson, Samuels Howard ..... gas
Mills, Simon Jones et al 1 ..... dry
Farmer, Barbee-Ross 1 ..... dry
Kirk et al, Coursey 1 ..... dry
Holmes, Tower & McKanna 1 ..... dry
Sampson, Eppler et al 1 ..... dry
Boker, Tex-Tex & Pytex 1 10
Gates, Gwinnup et al 1 ..... dry
Davis, Jackson & Veihl 1 ..... dry
Golson, Roth & Faurot 1 ..... dry
Thoil, Barnsdall 1 ..... dry
Fuller, E. L. Chapman 2 ..... dry
Jennings-C, Cunningham et al 12-C ... gas
Baugh, Hunter 1 ..... dry
Fautot, Cox 1 ..... dry

Completions 24
Production 220
Dry holes 16
Gas wells 5
Gas production 11,250,000

COOKE COUNTY

Timmis-A, Kewanee Oil & Gas Co. 9 ... 100
Timmis-A, Kewanee Oil & Gas Co. 10 ... 500
Dennis, Shell Pet. Corp. 4 280
Dennis, Shell 5 265
Dennis, The Texas Co. 6 300
Timmis, Kewanee Oil & Gas Co. 13 82
Timmis, Kewanee Oil & Gas Co. 14 190
Timmis, Kewanee Oil & Gas Co. 3 15
Franklin et al, Pacific Oil & Gas Co. ... dry
Timmis-A, Kewanee Oil & Gas Co. 11 .. 325
Dennis, The Texas Co. 7 512
Cox, Westhelmer et al 1 ..... dry

Completions 12
Production 2568
Dry holes 2

EASTLAND COUNTY

Riddle, Hayes et al 1 ..... dry
Terrill, Outlaw et al 1 ..... dry
Simmons, Atwood et al 2 28
Hazzard, Goodwin et al 1 ..... dry
Collins, Kokomo Pet. Corp. 2 10
Harrington, Moorman 1 ..... dry
Lauderdale, Free 1 ..... dry
Marshall, Taylor et al 1 ..... dry
Harbin, Teatsorth et al 1 12
Good, Belva Oil Co. 6 15
Butler, Hoffman & Page 1 ..... dry
Thorp, McLester Oil Co. 6 25
Calvert, States Oil Corp. 8 25

Completions 13
Production 115
Dry holes 7

ERATH COUNTY

Liberty, Goodwin et al 1 ..... dry
Lattimer, T. P. Coal & Oil Co. 2 ..... gas
Smith, Snebold & White 2 ..... gas
Finch, Nelson Oil Syndicate 1 ..... dry

Completions 4
Dry holes 2
Gas wells 2
Gas production 136,000

MONTAGUE COUNTY

Cunningham-A, Bridwell Oil Co. and Continental Oil 3 78
Black, Cone & Kelcrease 1 ..... dry
Hutchinson, Barbee et al ..... dry
Salmon-C, The Texas Co. 2 12

Completions 4
Production 90
Dry holes 2

PALO PINTO COUNTY

Dalton, Thompson & Faeris 1 ..... dry
Hickson, Conway Bros. 1 ..... gas

Completions 2
Dry hole 1
Gas well 1
Gas production 250,000

JACK COUNTY

Mask, Hartt Pet. Co. 1 ..... dry
Knox, Lindsey Drlg. Co. ..... dry
Younger, Shappell Oil Co. 1 ..... dry
Byson, Pet. Prod. Co. and Texas 1 135
Jones, Pet. Prod. Co. 62

Completions 5
Production 197
Dry holes 3

HASKELL COUNTY

McKnight, Phillips Pet. Co. 1 ..... dry

THROCKMORTON COUNTY

Matthews, Reiter-Foster Oil Corp. 1 .... dry

STEPHENS COUNTY

Cunningham, Mid-Tex Oil Co. 8 65
Elliott, Lone Star Gas Co. 2 ..... gas
Swenson, Swensondale Oil Corp. 34 8
Cooper, Zingery Oil Co. et al 16
Houston, Hanlon Gas Co. 4 ..... dry
Langford, McDonald 1 ..... dry
Hitson, Root et al 2 ..... dry
Bargsley, Texas Fidelity Oil Corp. 1 .... dry

Completions 8
Production 89
Dry holes 4
Gas well 1
Gas production 7,500,000

SAN SABA COUNTY

Moore, C. S. Willmott 1 ..... dry

SHACKELFORD COUNTY

Huber, Hughes et al 1 ..... dry
Dyer, Mid-West Exploration Co. 4 55
Matthews-C, Ohio Texas Oil Co. 1 380
Davis, Phillips & Lampkin 1 ..... dry
Cook, Roeser Pendleton 88-A-60 25
Cook, Roeser & Pendleton, 38-A-61 30
Cook, Roser & Pendleton 40-A-61 25
Cook, Roeser & Pendleton, 11-A-83 25
Cook, Roeser & Pendleton 2-A-88 275
Dennis, Sedwick Oil Co. 12 ..... dry
Matthews, Shulman Harry 1 ..... dry
Matthews-S, Skelly Oil Co. 4 ..... dry
Hill, Tannehill et al 1 ..... dry
Isbell-B, Texas Consolidated Oil Co. 66 dry
Matthews, Combest Less Oil Co. 1 ..... dry
Matthews, Earl & Dull 6 95
Davis, Petroleum Prod. Co. 2 22
Lones, Simms Pet. Co. 8 60
Matthews, Treat Oil Co. 5 ..... dry
Matthews, Carbb & McNell 2 ..... dry
Matthews-A, Engle Bros. 3 260
Matthews, McMurry 1 ..... dry
Davis, Grisham-Hunter 1 ..... dry
Davis-A, Grisham-Hunter 1 ..... dry
Matthews, Loggie & Arndt 1 ..... dry
Davis, Midland Oil Co. 1 8
Gustafson, Montcreif et al 1 ..... dry
Davis, Petroleum Prod. Co. 3 37
Will, Tannehill et al 2 ..... dry
Whitney, Tannehill et al 1 ..... dry
Jackson, Texas Consolidated Oil Co. 1 .. dry
Huskey, Croon et al 1 ..... dry
Humphrey Bros., Flippen 1 ..... dry
Ohio-Texas Oil Co., Matthews-C 2 120

Completions 34
Production 1417
Dry holes 20

WILBARGER COUNTY

Waggoner, Phillips Pet. Co. 2 ..... dry
Waggoner-NN, Phillips Pet. Co. 21 27
Waggoner-I, Burton 1 156
Waggoner, Continental Oil Co. 1 ..... dry
Waggoner-D, Cosden & Co. 1 146
Webb Waggoner, Robertson Drlg. Co. 1. 165
Waggoner-D, The Texas Co. 3 63
Waggoner-E, The Texas Company 17 ... 170
Waggoner-B, Wilbarger Oil Co. 1 12
Waggoner-B, Empire Gas & Fuel Co. 4 .. 276
Waggoner-L, Fain McGaha 9 127
King Royalty Co., et al Waggoner 1 ..... dry
Waggoner-G, Kolp 3 73
Waggoner-G, Kolp 5 75
Waggoner, Lewis Prod. Co. 9 135
Waggoner-B, Melat Oil Co. 1 75
Waggoner, Schuett et al 1 ..... dry
Waggoner-B, Staley Wynne & Co. 2 250
Waggoner-G, Staley Wynne & Co. 2 250
Waggoner, E. P. Waggoner 1 96
Waggoner-K, Waggoner Ref. Co. 6 70
Waggoner-I, Waggoner Ref. Co. 2 325
Waggoner-C, Wilbarger Oil Co. 1 ..... dry

Completions 23
Production 2491
Dry holes 5

WICHITA COUNTY

McFall, R. J. Brown 1 ..... dry
John W. Caldwell, Allen & Kemp 14 8
Waggoner Bros., Humble et al 1 49
Boyd, Stump & Co. 1 30
Jennings, Bullington Lee et al 10 ..... dry
Burnett-A, Harry Hines 2 20
Waggoner-C, Hunter 1 25
Burnett-A, Panhandle Ref. Co. 1 65
R. R. Robertson, Waggoner 1 55
Kemp & Kempner, Staley & Wynne 16 .. dry
Boyd, Stump & Co. 1 24
Boyd, Stump & Co. 2 300
Morgan, Underwood Drilling Co. 1 ..... dry
Waggoner, Venmex Oil Co. 15 10
Bishop, Comar & Prairie Oil & Gas Co. 6 25
Wighley, Hammon 1 ..... dry
McCarty, Hammon & Garrett 2 ..... dry
Burnett, Panhandle Ref. Co. 2 60
Fisher, Pet. Investment Co. 9 ..... dry
Michie, Reiner & Baileys 1 410
Waggoner-A, Ryan Pet. Corp. 1 3

Completions 20
Production 1075
Dry holes 7

YOUNG COUNTY

Snider, Bradstreet Co. 7 10
Edwards, Bratchers 5 20
Rushing, Callender et al 1 ..... dry
Jones, Hedrick Camp Drlg. Co. 1 ..... dry
Gillmore, May Camp Drlg. Co. 1 ..... dry
Prideaux, May Camp Drlg. Co. 4 10
Hoak, Nix & Pennell 1 ..... dry
Calvin, Pennell et al 3 40
Deitrich, Pet. Prod. & Madden 1 ..... dry
Bishop, Rathke Oil Co. 5 ..... dry
Snider, Bradstreet 8 25
Matthews, Bradstreet 1 ..... dry
Gregg, Brashear & Peacock 1 ..... dry
Edwards, Bratcher & Riggs 1 ..... dry

Bagley, Casey 1 ..... dry
Bagley, Casey 2 ..... dry
Stewart, Williams 1 ..... dry
Calvin, Wise et al 6 7
Campbell-B, Continental Oil Co. 6 98
Calvin, Pennell et al 4 25
Langston, The Texas Co. and Oliphant 1 dry
Petty, The Texas Co. 1 ..... dry
Edwards, Bratchers 6 12
Brown, Bundy et al 1 ..... dry
Thomas, Mutler & McAlisters 1 70
Boone, Casey et al 1 ..... dry
Campbell, Continental & Underwoods 1 . dry
Dyer, Kimbrell & Lyles 2 5
Gredd, Lloyd Oil Corp. 1 ..... dry
Prideaux, May Camp Drilling Co. 1 9
Colvin, Rennell et al 5 5
Gillmore, Robertson Drilling Co. 1..... 5
Gillmore, Robertson Drilling Co. 3..... 5
Prideaux, Walton et al 3 7
Scott, Fultz et al 1 ..... dry
Goode, Scott & Nance 1 ..... dry

Completions 36
Production 353
Dry holes 20

SOUTHWEST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Mirando	29	925	13	9	4	37	41
Yoast Field ..	5	732	1	0	2	0	2
Dobrowolski ..	2	7	0	0	1	1	2
Somerset	2	8	0	1	2	0	2
Joe Bruner ...	59	21,858	3	0	19	30	49
Luling	1	30	0	0	0	1	1
Refugio	9	3,915	2	2	3	9	12
Miscellaneous .	29	0	28	3	14	108	122
Total April .	136	27,475	45	15	45	186	231
Total March.	81	24,082	31	8	47	200	247
Difference ..	55	3,393	14	7	2	14	16

WELLS COMPLETED
SCHOOLFIELD-OB'YRNE FIELD—DUVAL
Bowe, S. & O. Oil Co. 1 ..... abd
Hahl, S. & O. Oil Co. 2 ..... abd. loc.
Hahl, S. & O. Oil Co. 3 ..... abd. loc.
Hahl, Magnolia Pet. Co. 1 ..... gas
Krauter, Onyx Oil Co. 3 ..... abd
Norton, Sun Oil Co. 3 250
Moody, G. M. Partee 1 250
Bowe, S. & O. Oil Co. B-3 25
SIMMS FIELD
Dinn, Simms Oil Co. 4 ..... gas
Dinn, Houston Oil Co. 1 ..... gas
HUMBLE FIELD
Kohler, Humble O. & R. 18 ..... gas
Kohler, Humble O. & R. 21 ..... gas
COLE FIELD
King-Harper, Wm. F. Morgan 2 ..... gas
King-Harper, Wm. F. Morgan 3 ..... abd.
RANDADO FIELD—JIM HOGG
M. S. Banks, Magnolia Pet. Co. 41 .. abd
HENNE-WINCH & FARISS
Lopez, A. L. Kiteelman 1 ..... gas
ALWORTH POOL
Alworth, Alworth-Stevens-Hild 16 .... abd
WEBB COUNTY
Bruni, O. W. William 4 ..... gas
King-Benavides, Magnolia Pet. 1 ..... gas
De la Garza, A. G. Deck 1 ..... abd
Benavides, Texas Company 1 ..... abd
Bruni, O. W. Killam 7 ..... abd
Killam, Laredo Oil 14 50
Bruni, O. W. Killam 8 ..... abd
ZAPATA COUNTY
Cuellar, O. W. Killam 13 50
Hinnant, T. P. Morgan 1 50
Jennings, South Texas Prod. 4 ..... abd
Hinnant, Wm. F. Morgan 1 250
Henry, O. Henry Oil 1 ..... abd

Wells completed 29
Production 925
Dry 13
Gas 9
Gas Production 243,000,000

YOST-BASTROP
Yost, Atlantic Oil Prod. 4 17
Barnett, Sun Oil 1 ..... abd
Yost, Texas Company 4 400
Yost, Atlantic Oil Prod. 5 15
Yost, Texas Company 5 300

Wells completed 5
Production 732
Dry 1

DOBROWOLSKI-BEXAR
Adams, Amelia Balzart 2 4
Dobrowolski, E. H. Eckert 3 3

Wells completed 2
Production 7

SOMERSET POOL
Fee, W. H. Kennon ..... gas
Hughes, W. R. Hamilton 8

Wells completed 2
Production 8
Gas 1

BRUNER FIELD—CALDWELL
Hanson, Cranfill & Reynolds 1 700
Northcut, Cranfill & Reynolds 2 600
Fleming, Forest Oil 1 300
Malone, Golden West 3 60
Wilson, Golden West 8 ..... abd
Wilson, Golden West B-1 ..... abd
Allen, Gulf Production 3 144
Allen, Gulf Production 5 125
Carter, Gulf Production 5 500
Carter, Gulf Production 6 350
Carter, Gulf Production 7 50
Carter, Gulf Production 8 2500
Carter, Gulf Production 9 150
Davis, Gulf Production 4 200
Smith, Gulf Production 9 51
Tiller, Gulf Production 1 250
Tiller, Gulf Production 7 340
Tiller, Gulf Production 8 50
Wright, Gulf Production 2 200
Wright, Gulf Production 3 300
Wright, Gulf Production 4 150
Wright, Gulf Production 5 175
Wright, Gulf Production 7 100
Allen, Humble O. & R. 4 200
Allen, Humble O. & R. 5 165
Allen, Humble O. & R. 6 325
Allen, Humble O. & R. 7 175
Briscoe, Humble O. & R. 1 400
Briscoe, Humble O. & R. 2 1000
Hanson, Humble O. & R. 1 160
Hanson, Humble O. & R. 2 175
Hanson, Humble O. & R. 3 500
Johnson, Humble O. & R. B-1 500
Moses & Baggett, Humble O. & R. A-6 . 1100
Moses & Baggett, Humble O. & R. A-7 . 400
Moses & Baggett, Humble O. & R. B-5 . 2500
Moses & Baggett, Humble O. & R. B-6 . 100
Moses & Baggett, Humble O. & R. B-7 . 125
Tiller, Humble O. & F. 7 150
Tiller, Humble O. & R. A-3 300
Tiller, Humble O. & R. C-1 240
Wright, Humble O. & R. 1 475
Wright, Humble O. & R. 2 250
Colding, C. E. Lange 2 25
Wilson, Lutex Oil Inc. 4 50
Malone, Morgan Bros. 1 100
Carter, Shell Pet. Corp. B-1 150
Malone, Shell Pet. Corp. 5 405
Malone, Shell Pet. Corp. 6 350
Smith, Shell Pet. Corp. 3 375
New, Shell Pet. Corp. 1 90
New, Shell Pet. Corp. 3 632
Smith, Shell Pet. Corp. 1 574
Tiller, Shell Pet. Corp. 2 ..... abd
Tiller, Shell Pet. Corp. 6 1500
Tiller, Shell Pet. Corp. 8 932
Malone, Sun Oil 6 50
Merriweather, Texas Company 5 60
Hickman, Towns & Porter 5 30

Wells completed 59
Production 21858
Dry 3

LULING-GUADALUPE
Shanklin, Magnolia Pet. Co. 9 30
REFUGIO-REFUGIO
Cummins, Houston Gulf Gas 1 115
Fox, Houston Gulf Gas 1 ..... abd
Fox, Houston Gulf Gas 3 ..... gas
Heard, Houston Gulf Gas 7 ..... gas
Heard, Houston Oil 5 800
Rooke, Houston Oil 10 2000
Rogers, Mission Drilling 3 ..... abd
Heard, Saxet Gas 6 1000

Wells completed 8
Production 3915
Dry 2
Gas 2
Gas production 110,000,000

MISCELLANEOUS
BASTROP COUNTY
Hendricks, Loomis & Jarmon 1 ..... abd
BEXAR COUNTY
Bridge, Wm. M. Morgan 1 ..... abd
Irrigation Co., Dixie Oil 1 ..... abd
Carle, J. J. Curl 1 ..... abd
Ward, Allen Burnam 1 ..... abd
CALDWELL COUNTY
Branyon, Adams & Lyles 1 ..... abd
Smith, Cranfill & Reynolds 1 ..... abd
Gomillion, Alexander & Smith - ..... abd
Callahan, Al Buchanan et al 1 ..... abd
Robinett, M. O. Rayor 1 ..... abd
FAYETTE COUNTY
Cervenka, R. E. Phalon 1 ..... abd
FRIO COUNTY
Eschenburg, Austin Johnson 1 ..... abd
GOLIAD COUNTY
Frommie, J. E. Alexander 1 ..... abd
Murray, Booth McCarson 1 ..... abd
GONZALES COUNTY
Karnstadt, Indian Petroleum 1 ..... abd
Lumm & Bouldin, L. P. Unkel 1 ..... abd
GUADALUPE COUNTY
Whitley, Magnolia Pet. 1 ..... abd
Lambrecht, Texas Company 1 ..... abd
Landmark, Trinity Drillers 1 ..... abd
MEDINA COUNTY
Conger, E. R. Thomas 1 ..... abd
Haegelin, W. M. Allison 1 ..... abd
NUECES COUNTY
Dunn, Saxet Gas Co. 5 ..... gas
Kelly, F. P. Zoch ..... abd
Roy Clift, Milam Drilling 1 ..... abd
LAVACA COUNTY
Russekk, Texas Company 1 ..... abd
LIVE OAK COUNTY
Land & Cattle Co., Houston Oil A-1 ... gas
REFUGIO COUNTY
Glenewinkle, Magnolia Pet. 1 ..... abd
SAN PATRICIO COUNTY
Bennett, Spencer & Rhoades 2 ..... gas
UVALDE COUNTY
Smythe, Pure Oil 2 ..... abd

Wells completed 29
Gas 3
Dry 26
Gas production 150,000,000

EAST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	*Rigs	Dig.	Ttl.
Bowie	0	0	0	0	0	1	1
Camp	0	0	0	0	0	1	1
Cass	1	0	1	0	0	0	0
Marion	1	15	0	0	0	0	0
Harrison	2	0	2	0	0	5	5
Panola	8	0	1	7	2	7	9
Red River	0	0	0	0	0	3	3
Shelby	0	0	0	0	0	2	2
Total April.	12	15	4	7	2	19	21
Total March	6	0	2	4	4	25	29
Difference ..	6	15	2	3	2	6	8

*Gas production, 58,366,000.

WELLS COMPLETED
CASS COUNTY
Wm. Lambert Survey—Ed Lambert, Davis & Pigg 1 ..... dry
MARION COUNTY
N. Gupton Survey—Mebane & Stiles, Trimount Petroleum Co. 1-A 15
HARRISON COUNTY
R. W. Bedford Survey — Timmons, Eureka Natural Gas Co. 1 ..... gas
Joel Lipscomb Survey—Bryson, C. H. Lyons et al 2-A ..... gas

Gas production 6,500,000

PANOLA COUNTY
E. Jones Survey—Adams, Adams & Walker 1 ..... gas
B. C. Jordan Survey—Floyd, H. H. Alvord 1 ..... gas
A. Birdsong Survey—Burns, Beckman & Freeman ..... dry
W. Williams Survey—Burns, Beckman & Freeman 5 (loc.) ..... abd
A. Birdsong Survey—Burns, Beckman & Freeman 6 (loc.) ..... abd
W. H. Wooley Survey—Johns, Nemours Corp. 1 ..... gas
B. C. Jordan Survey—C. G. Steels, Magnolia Petroleum Co. 15 ..... gas
B. C. Jordan Survey—Thomas Moore, Natural Gas Producing Co. 3 (loc.) .. abd
Thomas Cox Survey—T. C. Adams, The Texas Company 9-A ..... gas

Wells completed 8
Gas 5
Dry 1
Gas production 51,866,000

EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Abd.	Gas	Rgs.	Dig.	Ttl.
Anderson	3	0	2	1	1	6	7
Angelina	0	0	0	0	0	1	1
Cherokee	1	0	1	0	0	0	0
Falls	1	0	1	0	0	0	0
Henderson	1	0	1	0	0	0	0
Limestone	0	0	0	0	0	2	2
McLennan	0	0	0	0	0	3	3
Milam	1	0	1	0	1	3	4
Navarro	2	0	2	0	0	0	0
Robertson	0	0	0	0	0	1	1
Rusk	1	0	1	0	0	2	2
Smith	1	0	1	0	0	0	0
Upshur	0	0	0	0	0	1	1
Van Zandt	1	0	1	0	0	1	1
Total April .	12	0	10	1	2	20	22
Total March.	12	580	9	1	0	22	22
Difference ..	1	580	1	0	2	2	0

WELLS COMPLETED
ANDERSON COUNTY
Bethel-Willie Bruce, Pure Oil 2 ..... abd
Boggy Creek, Gauger, Humble 1 ..... abd
Boggy Creek-Annie Purvey, Humble Oil & Refg. Co. 1 ..... gas

Wells completed 3
Gas 1
Abandoned 2

FALLS COUNTY
Adams, Paggi Brothers 1 ..... abd
HENDERSON COUNTY
Richards, G. C. Foster et al 1 ..... abd
MILAM COUNTY
W. T. Johnson, Milch & Clark 1 ..... abd
NAVARRO COUNTY
Dearden, Transcontinental Oil 1 ..... abd
Prince, Hicks & Deering 1 ..... abd

Wells completed 2
Abandoned 2

RUSK COUNTY
Sparks, Curry et al 1 ..... abd
SMITH COUNTY
Williams, Pure Oil Co. 1 ..... abd
VAN ZANDT COUNTY
N. A. Henderson, Pure Oil Co. 1 ..... abd
CHEROKEE COUNTY
Boggy Crk.-Elliott & Clark Humble 1-B abd

NORTH LOUISIANA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	*Rigs	Dig.	Ttl.
Bienville	1	0	0	1	1	0	1
Bossier	3	5	2	0	1	7	8
Caddo	11	340	1	1	5	20	25
Catahoula	0	0	0	0	0	1	1
Claiborne	0	0	0	0	0	3	3
De Soto	6	0	4	2	0	6	8
East Carroll ..	1	0	0	1	0	0	0
Franklin	0	0	0	0	1	1	2
Grant	0	0	0	0	0	2	2
LaSalle	2	100	1	0	0	5	5
Lincoln	0	0	0	0	0	1	1
Morehouse	4	0	0	4	4	5	9
Natchitoches .	0	0	0	0	0	2	2
Ouachita	8	0	2	6	8	15	23
Red River	1	0	0	1	1	3	4
Richland	3	0	0	3	5	8	13
Sabine	0	0	0	0	1	6	7
Tensas	0	0	0	0	0	1	1
Union	5	0	2	3	2	4	6
Webster	4	40	1	2	3	8	11
Total. April.	49	485	13	24	32	98	130
Total March	32	135	11	17	43	91	134
Difference ..	17	350	2	7	11	7	4

*Gas production: Bienville, 8,000,000 ft.; Caddo, 50,000 ft.; De Soto, 4,153,000 ft.; East Carroll, 31,010,000 ft.; Morehouse, 31,000,000 ft.; Ouachita, 26,500,000 ft.; Richland, 94,000,000 ft.; Red River, 50,000 ft.; Union, 33,387,000 ft.; Webster, 41,000,000 ft.; total, 269,150,000 ft.

WELLS COMPLETED
BIENVILLE PARISH
16-16-10 State, W. P. Wallace 1 ..... gas

Gas production 8,000,000

BOSSIER PARISH
14-19-11 Larkin, R. L. Crook 10 ..... dry
14-19-11 Larkin, R. L. Crook 11 5
21-19-11 Fee, G. W. Wetherbee 1-D ... dry
CADDO PARISH
22-22-15 Jolly, Bayou State Oil Corp. 26 100
22-22-15 Jolly, Bayou State Oil Corp. 27 20
33-21-16 Fee, W. D. Chew, 2-B ..... gas
34-21-16 State, W. D. Chew 6 (drk) .. abd
13-21-15 Dillon, Dixie Oil Co. 96 90
21-21-15 Muslow, C. H. French 5 25
18-17-16 Bryson, Loraine Syndicate 1-D gas
23-21-15 Dillon, Magnolia P. Co. 21 (loc.) abd
18-15-12 Ellerbe, Nemours Corp. 1 .... dry
32-21-15 Guy, Shreveport Oil Corp. 2 ... 65
22-20-15 Baird, Simplex Oil Co. 4 40

Wells completed 11
Production 340
Gas 1
Dry 1
Gas production 50,000

DE SOTO PARISH
22-14-12 Mahoney, Benedum & Trees 1 .. dry
2-15-14 Nicholson, Benedum & Trees 1 dry
3-10-13 Jackson, Benson Oil Co. 1 (drk) abd
3-10-13 Boatright, Luke Case, Tr. 1 .. gas
4-12-11 Fortson, Magnolia Pet. Co. 4 .. gas
1-13-14 Sample, R. O. Roy 1 ..... dry

Wells completed 6
Gas 2
Gas production 4,153,000

EAST CARROLL PARISH
6-19-11 O'Brien, Palmer Corp. 2 ..... gas

Gas production 31,010,000

LaSALLE PARISH
17-10-2e Urania, Ark. Nat. G. Corp. 11-B dry
13-10-1e M. H. King, G. W. Zoder 1 .. 100
MOREHOUSE PARISH
31-21-5 Crowder-Moore, Interstate Natural Gas Corp. 1 ..... gas
15-20-4 Flemming, Interstate N. G. 1 .. gas
1-20-4 Miles, Southern Carbon Co. 2 .. gas
2-20-4 Tensas, Southern Carbon Co. 9 .. gas

Gas production 31,000,000

OUACHITA PARISH
6-19-5 Fee, LaDel Oil Prop. Inc. 6 .... gas
24-19-4 Fee, Palmer Corp. 6 ..... gas
26-20-4 Moore, Peerless Carbon Co. 4 .. gas
14-18-4 Jones, Pioneer Gas Co. 2 (loc.) abd
10-18-4 McGee, Pipes & Mack 2 ..... gas
34-20-4 Fairbanks, Southern Carbon 12 . gas
14-19-3 Abe Arent, United Carbon 1 .... dry
36-19-3 Spade, United Carbon 2 ..... gas

Wells completed 8
Gas 6
Dry 1
Gas production 26,500,000

RED RIVER PARISH
17-13-10 Fee, C. H. Tuttle 1 ..... gas

Gas production 50,000

RICHLAND PARISH
36-16-5 Noble, Magnolia Pet. Co. 1 .... gas
22-16-6 Hemler, Northern La. Nat. Gas 1 gas
30-16-7 S. R. Humble, Richland Op. 1 .. gas

Gas production 94,000,000

UNION PARISH
6-23-1e Hudson, Carter & Wingfield 2 dry
7-23-1e Hudson, Carter & Wingfield 3 dry
16-20-4 Peek, Feazel et al 1 ..... gas
12-20-3 Vester Cook, Industrial Gas 1 . gas
8-20-4 Stripling, Imperial Oil & Gas Pro. Co. 1 ..... gas

Wells completed 5
Gas 3
Dry 2
Gas production 33,387,000

WEBSTER PARISH
20-23- 9 Mayfield, J. W. Clark 2 40
15-23- 9 Lewis, J.P.Hawkins Well Syn. 1 dry
23-21-10 Ira Cox, Magnolia Pet. 4 ..... gas
1-22-10 W. D. Munn, Nemours Corp 1. gas

Gas production 41,000,000

ARKANSAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	*Rigs	Dig.	Ttl.
Ashley	0	0	0	0	0	2	2
Bradley	0	0	0	0	1	1	2
Calhoun	1	0	1	0	0	0	0
Chicot	0	0	0	0	0	2	2
Clark	0	0	0	0	0	1	1
Clay	0	0	0	0	0	1	1
Columbia	0	0	0	0	0	1	1
Drew	0	0	0	0	0	1	1
Faulkner	0	0	0	0	0	1	1
Franklin	0	0	0	0	0	1	1
Garland	0	0	0	0	0	2	2
Jackson	0	0	0	0	0	1	1
Johnson	0	0	0	0	0	2	2
Little River ..	0	0	0	0	0	1	1
Logan	1	0	1	0	0	2	2
Madison	0	0	0	0	0	1	1
Miller	1	0	1	0	0	0	0
Nevada	0	0	0	0	0	2	2
Ouachita	4	45	3	0	2	11	13
St. Francis	0	0	0	0	1	0	1
Union	11	4,294	4	1	5	17	22
Washington	0	0	0	0	0	3	3
White	0	0	0	0	0	1	1
Woodruff	0	0	0	0	0	1	1
Total April.	18	4,339	10	1	9	55	64
Total March	18	3,260	9	1	15	52	67
Difference ..	0	1,079	1	0	6	3	3

*Gas production: Union, 6,800,000 ft.

WELLS COMPLETED
CALHOUN COUNTY
29-16-12 Arkansas Timber Co., Joe Hurley 1 ..... dry
LOGAN COUNTY
26-8-24 W. H. Parks, Ark. N. G. 1 ..... dry
MILLER COUNTY
23-15-26 Dale, E. A. Martin, Tr. 4 .... dry
OUACHITA COUNTY
13-15-16 Goodwin, J. E. Crosbie 1 .... dry
32-15-15 Goodwin, Gulf Ref. Co. 8 ... dry
5-16-15 Goodwin, Gulf Ref. Co. 9-A . dry
25-15-18 Wilson, McDonald Brothers 1 .. 45
UNION COUNTY
7-17-13 Morris, Ark. Nat. Gas Corp. 1 1122
27-18-13 Terrell, Bell et al 1 ..... dry
11-17-18 McDonald, T. J. Bush, Tr. 1 .. dry
10-16-15 Gillen, Hollifield & McAlphin 18 12
9-17-14 Kelly, Lion Oil Refining Co. 2 gas

15-17-14 Rowland, Lion Oil Refining 5. dry
7-17-13 Oliver, Ohio Oil Co. 1.....2880
12-17-14 B. H. Raulston, Ohio Oil 1... 175
9-17-14 Perdue, Rovenger Oil Corp. 2-B dry
10-16-15 Lawton, Sam Richardson 7... 35
9-17-14 Kelly, Skelly Oil Co. 2..... 80

Wells completed 11
Production 4294
Gas 1
Dry 4
Gas production 6,800,000

MISSISSIPPI

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dig.	Ttl.
Alcorn	0	0	0	0	0	1	1
Chickasaw	0	0	0	0	0	1	1
Claiborne	0	0	0	0	0	2	2
Hinds	0	0	0	0	3	3	6
Humphreys	0	0	0	0	0	1	1
Lauderdale	0	0	0	0	2	1	3
Lincoln	1	0	1	0	0	0	0
Monroe	0	0	0	0	0	6	6
Rankin	0	0	0	0	0	1	1
Sharkey	1	0	1	0	0	0	0
Warren	0	0	0	0	1	0	1
Webster	0	0	0	0	0	1	1
Yalobusha	0	0	0	0	0	1	1
Total April	2	0	2	0	6	18	24
Total March	9	0	9	0	6	18	24
Difference	7	0	7	0	0	0	0

WELLS COMPLETED
LINCOLN COUNTY
21-8-6e Pat Case, Louisiana-Mississippi Land & Oil Co. 1..... abd
SHARKEY COUNTY
30-11-6 Houston, Atlantic Oil Producing Co. and The Texas Company 1..... dry

WEST TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dig.	Ttl.
Fayette	0	0	0	0	1	0	1
Decatur	0	0	0	0	0	2	2
Total April	0	0	0	0	1	2	3
Total March	1	0	1	0	1	2	3
Difference	1	0	1	0	0	0	0

ALABAMA

Summary of Field Operations

	Rigs	Dig.	Ttl.
Choctaw	0	1	1
Houston	0	1	1
Lawrence	0	2	2
Lamar	0	1	1
Marion	1	0	1
Morgan	0	1	1
Washington	0	3	3
Total April	1	9	10
Total March	2	7	9
Difference	1	2	1

GULF COAST

Summary of Field Operations
Texas

	Comp.	Prod.	Abd.	Gas	Rgs.	Dig.	Ttl.
Barbers Hill	8	6,895	2	0	1	16	17
Batson	2	38	0	0	0	2	2
Big Creek	4	230	2	0	1	3	4
Blue Ridge	3	2,800	0	0	1	3	4
Boling	5	1,000	3	1	2	7	9
Clay Creek	1	40	0	0	0	3	3
Damon Mound	0	0	0	0	0	1	1
DuWalt	7	7,857	0	0	3	4	7
Goose Creek	3	200	0	0	1	2	3
High Island	1	300	0	0	0	3	3
Hull	7	1,180	3	0	2	5	7
Humble	6	10,540	0	0	2	4	6
Liberty	9	465	3	0	1	13	14
Markham	0	0	0	0	0	2	2
Nash	0	0	0	0	0	1	1
N. Dayton	0	0	0	0	1	1	2
Orange	2	20	1	0	0	2	2
Orchard	1	800	0	0	0	1	1
Pierce Jct.	9	10,724	0	0	1	12	13
Raccoon Bend	5	2,175	0	0	2	13	15
Saratoga	0	0	0	0	0	6	6
Sour Lake	3	40	0	0	0	3	3
Spindletop	10	6,925	1	0	2	13	15
Miscellaneous	22	140	17	2	2	32	34
Total Apr.	108	51,469	32	3	22	152	174
Total Mar.	97	29,625	37	4	15	157	172
Difference	11	21,844	5	1	7	5	2

South Louisiana

	Comp.	Prod.	Abd.	Gas	Rgs.	Dig.	Ttl.
Anse LaButte	0	0	0	0	0	1	1
Bayou Bo'llon	4	0	4	0	0	1	1
Edgerly	3	75	2	0	0	3	3
Hackberry	16	2,417	5	0	1	9	10
Jennings	4	250	3	0	0	4	4
Lockport	2	700	1	0	0	7	7
Sorrento	1	0	1	0	0	1	1
Starks	0	0	0	0	0	3	3
Sulphur	5	2,800	3	0	0	2	2
Sweet Lake	0	0	0	0	0	2	2
Vinton	4	265	1	0	1	3	4
Miscellaneous	8	0	8	0	9	16	25
Total Apr.	47	6,507	28	0	11	52	63
Total Mar.	43	6,615	26	1	9	71	80
Difference	4	108	2	1	2	19	17
Ttl Gulf Coast	155	57,976	60	3	33	204	237
Total March	140	36,240	63	5	24	227	252
Difference	15	21,736	3	2	9	24	15

WELLS COMPLETED
BARBERS HILL—CHAMBERS COUNTY
Tarbutton, Joe Bashara 1 300
Chambers, Yount Lee Oil Co. 2 1125
Shaw, Rexall Oil Co. 1..... 500
Richardson, Yount Lee Oil Co. 4..... abd
Means et al, Bennett Pet. Co.-Republic Prod. 1 2400
Chambers, Yount Lee Oil Co. 3 2190
Kirby, Humphreys Corp. 6-B ..... abd
Kirby, Bennett Petroleum Co. 2 380

Wells completed 8
Production 6895
Abandoned 2

BATSON—HARDIN COUNTY
Paraffine, Ada Belle Oil Co. 126 23
Trustee, Deutser Oil Co. 20 15

Wells completed 2
Production 38

BIG CREEK—FORT BEND COUNTY
Davis, Gulf Prod. Co. 31 ..... abd
T. W. Davis, Gulf Prod. Co. 18..... 30
T. W. Davis, Gulf Prod. Co. 52..... 200
Davis, Navarro Oil Co. 2 ..... abd

Wells completed 4
Production 230
Abandoned 2

BLUE RIDGE—FORT BEND COUNTY
Robinson, Navarro Oil Co. 6-B.....1400
Invincible Oil Co. 7 200
Blakely, Blakely & Means 2 300

Wells completed 3
Production 1900

BOLING—FORT BEND COUNTY
Armstrong Scott & Peck 1 ..... abd
Dipple, The Texas Company 1-B..... 100
E. C. Farmer, The Texas Company 2.... abd
Hyde, South Texas Pet. Co. 1 ..... gas
Rogers, Sun Oil Co. 2 ..... abd

Wells completed 5
Production 100
Abandoned 3
Gas 1

CLAY CREEK—WASHINGTON COUNTY
Witt, Sun Oil Co. 2 40

DEWALT—FORT BEND COUNTY
Brazos, Humble Oil & Ref. Co. 5 1200
Bankers Mortgage, Humble Oil & Ref. Co. 1-A 1300
Sugarland, Humble Oil & Ref. Co. 6....1000
Brazos Farms, Humble Oil & Ref. Co. 4. 257
Brazos Farms, Humble Oil & Ref. Co. 3.1200
Sugarland, Humble Oil & Ref. Co. 5....1500
Brazos Farms, Humble Oil & Ref. Co. 2.1400

Wells completed 7
Production 7857

GOOSE CREEK—HARRIS COUNTY
Gaillard, Humble Oil & Ref. Co. 27.... 15
Ashell-Smith, Gulf Prod. Co. 25..... 170
Beaumont Pet. Co., Gulf Prod. Co. 15... 15

Wells completed 3
Production 200

HIGH ISLAND—GALVESTON COUNTY
Geo. Smith, Gulf Prod. Co. 2-A 300

HULL—LIBERTY COUNTY
Dolbear, Republic Prod. Co. 32 ..... abd
Phoenix, Gulf Prod. Co. 92 30
Dolbear, Republic Prod. Co. 103 700
Phoenix Dev. Co., Gulf Prod. Co. 88..... 250
Phoenix, Gulf Prod. Co. 42 200
Dolbear, Republic Prod. Co. 25 ..... abd
Dolbear, Republic Prod. Co. 35 ..... abd

Wells completed 7
Production 1180
Abandoned 3

HUMBLE—HARRIS COUNTY
River, Sun Oil Co. 46 100
Stevenson, The Texas Company 39.....7000
House, West Prod. Co. 1 500
Herman, T. W. Horn 33 40
House, The Texas Company 22..... 600
Morris, South Texas Pet. Co. 3.....2300

Wells completed 6
Production 10,540

LIBERTY—LIBERTY COUNTY
Riviere, Humble Oil & Ref. Co. 4-B.... 5
Revierre, Fort Bend Oil Co. 2..... 50
Welder, Humble Oil & Ref. Co. 3..... abd
Baldwin, Navarro Oil Co. 2..... abd
Mitchell, Sun Oil Co. 41 150
Mitchell, Yount Lee Oil Co. 16 50
Mitchell, Sun Oil Co. 40 ..... abd
Revierre, Fort Bend Oil Co. 3..... 50
Trinity River, Vacuum Oil Co. 1 160

Wells completed 9
Production 465
Abandoned 3

ORANGE—ORANGE COUNTY
McLean, Brownie Babbett Oil Co. 5.... 20
Tasco, Tillery Oil Co. 3 ..... abd

Wells completed 2
Production 20
Abandoned 1

ORCHARD—FORT BEND COUNTY
Moore, Gulf Prod. Co. 18 800

PIERCE JUNCTION—HARRIS COUNTY
Dooley, Navarro-Texas Ex. Co. 4.....1500
Dooley, Navarro Oil Co. 2 100
Dooley, Navarro-Texas Ex. Co. 14 1200
Fitzsimmons-Barrow, Shaw-Texas Exploration Co. 2 500
Whitehead, Anderson & Plummer 5 1200
Settegast, Rio Bravo Oil Co. 12-A.....2100
Settegast, Rio Bravo Oil Co. 13-A.....1660
Whitehead, Moody Corp. 4-B 1464
Herman Estate, Reece Wolfe 1 1000

Wells completed 9
Production 10,724

RACCOON BEND—AUSTIN COUNTY
Kearns, Humble-Valley 2 175
Sherrill, Humble-Valley 1 200
Urban, Humble Oil & Ref. Co. 3 600
Hardie, Humble Oil & Ref. Co.-Valley 3 200
Dietrich, Humble-Valley 2 1000

Wells completed 5
Production 2175

SOUR LAKE—HARDIN COUNTY
Fee, Minor Oil Co. 85 15
B. & E., Lake View Oil Co. 1 10
Fee, Gilbert Oil Co. 106 15

Wells completed 3
Production 40

SPINDLETOP—JEFFERSON COUNTY
Gladys City, Yount Lee Oil Co. 80 60
Marrs McLean, Gulf Prod. Co. 17 50
Gladys City, Yount Lee Oil Co. 85 1500
McFaddin, Yount Lee Oil Co. 29 900
Gladys City, Yount Lee Oil Co. 74 ..... abd
Fee, Yount Lee Oil Co. 6 1440
Gladys City, Yount Lee Oil Co. 77..... 800
McFaddin, Yount Lee Oil Co. 99 1200
Davis, Yount Lee Oil Co. 5 750
McFaddin, Yount Lee Oil Co. 96 225

Wells completed 10
Production 6925
Abandoned 1

MISCELLANEOUS TEXAS
Austin County—
Brenham—Sundeheusen, Golden Rule Oil Co. 8 100
Brenham—Sundeheusen, Golden Rule Oil Co. 9 20
Brazoria County—
Stratton Ridge—Brooks, Patterson et al 1 ..... abd
Clemens—Kropp, Patterson et al 2 .... abd
Chambers County—
Hankamer—Wilborn, Gulf Prod. Co. 1.. abd
Lost Lake—Mays, Pure Oil Co. 1 ..... gas
Fitzgerald, Cedar Bayou Oil Co. 1 ..... abd
Colorado County—
Altair—Brinkley, Humble Oil & Ref. Co. 1 ..... abd
Neuendorff, Shell Pet. Corp. 1 ..... abd
Fort Bend County—
Long Point—Trone, Gulf Prod. Co. 11... abd
Needville—Hartfield, West et al 1 ..... gas
Galveston County—
Irwin & Bishop, Long et al 1 ..... abd
Dickinson—Lobit, Republic Prod. Co. 1. abd
Grimes County—
Cuthrell, Holten et al 2 ..... abd
Hardin County—
Ollie—Sternenberg, Gaddy Oil Co. 2.... abd
Harris County—
Mykawa—Minnetex, Humble Oil & Ref. Co. 1 ..... abd
Jasper County—
Rockland—Boykin, Great Lakes Oil & Gas Co. 4 20
Jefferson County—
Gaddy (Russell), J. Homer Gaddy 1 ... abd
McFaddin, Deep Test Oil Co. 1 ..... abd
Rohwedder, I. W. Farhar et al 1 ..... abd
Waller County—
San Felipe—Brazos, Dixie Oil Co. 1.... abd
Fluckinger fee, Fluckinger et al 2..... abd

Wells completed 22
Production 140
Abandoned 17
Gas 2

SOUTH LOUISIANA
BAYOU BOUILLON—ST. MARTIN PARISH
Louisiana State, Rycade Oil Corp. 3.... abd
Bouillon fee, Rycade Oil Corp. 6..... abd
Bouillon fee, Rycade Oil Corp. 2..... abd
Bouillon fee, Rycade Oil Corp. 8..... abd

Wells completed 4
Abandoned 4

EDGERLY—CALCASIEU PARISH
Wilson, Wilson-Broach 2 ..... abd
Hunter, Rex Pet. Co. 9 ..... abd
Moore, Green Oil Co. 6 75

Wells completed 3
Production 75
Abandoned 2

HACKBERRY—CAMERON PARISH
Valery, Calcasieu Oil Co. 6 ..... abd
Duhon, Pure Oil Co. 1 272
Duhon, Pure Oil Co. 2 182
J. T. Kaough, Cameron Oil Co. 1 35
Dorion, Calcasieu Oil Co. 5 ..... abd
Calcasieu Lake, The Texas Co. 4-B..... abd
Kaough, Federal Oil Co. 4 208
Duhon, Federal Oil Co. 2 42
Kaough, Yount Lee Oil Co. 1 135
Vincent, Yount Lee Oil Co. 2 155
Benoit, Sunshine Oil Co. 1 ..... abd
Vincent, Sun Oil Co. 2 291
Noble, Rex Pet. Corp. 2 200
Gulf Land, Rycade & Humble 1 ..... abd
Noble, Rex Pet. Co. 1 800
Vincent, Sun Oil Co. 1 97

Wells completed 16
Production 2417
Abandoned 5

JENNINGS—ACADIA PARISH
Jennings Oil Co., E. F. Simms 1 ..... abd
Cockrell, E. F. Simms 2 ..... abd
Clemont Zigler, E. L. Meyers 1 ..... abd
Eunice Crowley, Jennings Pet. Co. 2.... 250

Wells completed 4
Production 250
Abandoned 3

LOCKPORT—CALCASIEU PARISH
Farquahar, Vacuum-Gulf 4-A ..... abd
Bordages, Vacuum Oil Co.Gulf Ref. 6... 700

Wells completed 2
Production 700
Abandoned 1

SORRENTO—ASCENSION PARISH
United Land Co., Gulf Ref. Co. 11..... abd

SULPHUR—CALCASIEU PARISH
Hunter, Watson et al 1 ..... abd
Fee, Union Sulphur Co. 740 ..... abd
Fee, Union Sulphur Co. 742 1000
Fee, Union Sulphur Co. 743 ..... abd
Fee, Union Sulphur Co. 741.....1800

Wells completed 5
Production 2800
Abandoned 3

VINTON—CALCASIEU PARISH
G. & N. Gray, Gulf Ref. Co. of La. 67... abd
Matilda Gray, Vinton Pet. Co. 2..... 75
Gray, Marrs McLean 12 90
Vincent, Vinton Pet. Co. 21 100

Wells completed 4
Production 265
Abandoned 1

MISCELLANEOUS LOUISIANA
Iberia Parish—
Loreauville—Fannie Kling, Gulf Ref. Co. 3 ..... abd
Jefferson Davis Parish—
Roanoke—Earle, Vacuum Oil Co. 1..... abd
J. W. DeVilbiss, Vacuum Oil Co. 1..... abd
LaFourche Parish—
Thibodaux—Starks, Gulf Ref. Co. 10.... abd
St. James Parish—
Reynaul Co., U. S. Mineral Dev. Co. 1... abd
St. Landry Parish—
Pt. Barre—Botney Bay Lumber Co., The Texas Co. 1 ..... abd
St. Tammany Parish—
Fritsche, West Pearl Oil Co. 1 ..... abd
Terrebonne Parish —
Lake Barre—Lake Barre, The Texas Co. 1 ..... abd

Wells completed 8
Abandoned 8

ROCKY MOUNTAIN AREA

MONTANA
Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Cat Creek	0	0	0	0	0	2	2
Kevin-Sunburst	2	15	1	0	15	15	30
Pondera	9	488	0	0	6	8	14
Miscellaneous	3	0	1	2	4	75	79
Total April	14	503	2	2	25	100	125
Total March	11	500	0	1	18	106	124
Difference	3	3	2	1	7	6	1

UTAH
Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Total April	1	0	1	0	5	30	35
Total March	0	0	0	0	4	30	34
Difference	1	0	1	0	1	0	1

COLORADO
Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Boulder	0	0	0	0	0	4	4
Fremont	1	100	0	0	1	17	18
Jackson	0	0	0	0	0	5	5
Larimer	0	0	0	0	1	7	8
Moffat	1	35	0	0	6	7	13
Pueblo	0	0	0	0	4	13	17
Routt	1	145	0	0	1	4	5
Miscellaneous	0	0	0	0	3	33	36
Total April	3	280	0	0	16	90	106
Total March	7	520	3	0	19	82	101
Difference	4	240	3	0	3	8	5

WYOMING
Summary of Field Operations

County or District—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Salt Creek	2	391	0	0	1	4	5
Big Horn	0	0	0	0	1	11	12
Carbon	0	0	0	0	0	13	13
Fremont	2	5	1	0	0	9	9
Hot Springs	0	0	0	0	0	4	4
Lincoln	0	0	0	0	2	7	9
Park	1	0	1	0	2	29	31
Sweetwater	0	0	0	0	2	11	13
Sublet	0	0	0	0	0	24	24
Uinta	0	0	0	0	3	10	13
Miscellaneous	0	0	0	0	5	17	22
Total April	5	396	2	0	16	139	155
Total March	4	4,935	0	0	19	133	152
Difference	1	4,539	2	0	3	6	3

NEW MEXICO
Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Catron	1	0	1	0	0	0	0
Chaves	0	0	0	0	1	6	7
Curry	1	0	1	0	0	0	0
DeBaca	0	0	0	0	0	3	3
Eddy	1	255	0	0	4	9	13
Lea	5	278	3	1	5	13	18
McKinley	0	0	0	0	1	8	9
San Juan	0	0	0	0	3	15	18
Miscellaneous	0	0	0	0	3	14	17
Total April	8	533	5	1	17	68	85
Total March	5	1,200	3	1	14	72	86
Difference	3	667	2	0	3	4	1

WELLS COMPLETED
MONTANA
33-35- 1 Haskins, Chicago Cons. Oil Co. 14 ..... dry
31-35- 1 Emmons, Dakota-Montana 22.. 15
9-27- 4 Jones, Midwest Ref. Co. 36 NE 26
16-27- 4 State, Midwest Ref. Co. 19 NE 60
16-27- 4 State, Midwest Ref. Co. 33 NE 25
16-27- 4 State, Midwest Ref. Co. 6 SE 30
16-27- 4 State, Midwest Ref. Co. 1 SW 40
22-27- 4 Hirschberg, Ohio Oil Co. 5 ... 40
16-27- 4 Gjullin, Triangle Oil Co. 3 ... 67
16-27- 4 State, Kevin Corp. 1 150
22-27- 4 Munson, Ohio Oil Co. 2 50
10- 5-60 Capitol Oil & Gas 1 ..... gas
13- 7-59 Montana Pet. Co. 5 ..... gas
2-31- 1 Matton, Michener et al 1 ..... dry

Completions 14
Production 503
Dry 2
Gas 2

NEW MEXICO
35-2n-16 Fenner & Bailey 1-S .....wtr
11-5n-35 Sanders, Frio Oil Co. 1 .....abd
13-17-30 Jackson, Flynn, Welch & Yates 1 255
13-26-36 Farnsworth, Midwest Ref. Co. 13 ..... gas
22-20-36 Reed, Marland Prod. Co. 1 ... dry

28-20-38 Warren, Marland Prod. Co. 1.. dry
17-26-37 Moberly, Texas Prod. Co. 1 ... dry
31-21-36 Lockhart, Marland Prod. Co. 1 278

Wells completed 8
Production 533
Gas 35,000,000
Dry and abandoned 5

UTAH

16-14s-10e Price River Pet. Co. 1 ..... dry

Wells completed 1
Dry 1

COLORADO

35-18-70 Steinmier, Continental Oil Co. 2 100
23-4n-92 Parkinson, Midwest Ref. Co. 7-M 35
18-6n-86 Quaintance-Hock, Texas Prod. Co. 6 145

Wells completed 3
Production 280

WYOMING

26-40-79 Midwest Oil Co. 16 94
35-40-79 Wyoming Asso. 16-SD-3 297
9-31-98 Martin B. Falk 2 ..... dry
26-34-95 Gates & Holman 1 5
30-52-101 Oregon-Wyo. O. & G. Co. 1 .. dry

Wells completed 5
Production 396
Dry and abandoned 2

EASTERN FIELDS

Summary of Wells Completed

Fields—	Comp.	Prod.	Dry	Gas
Allegany	33	66	0	0
Bradford	193	308	0	1
Middle Field	3	3	0	0
Venango-Clarion	33	36	0	7
Butler-Armstrong	15	16	4	4
S. W. Pa.	16	106	2	6
West Virginia	69	516	13	32
S. E. Ohio	76	1,167	17	15
Total April	438	2,218	36	65
Total March	345	1,665	26	55
Difference	93	553	10	10

Summary of Work Under Way

Fields—	Rigs	Drlg.	Ttl.
Allegany	8	22	30
Bradford	17	97	114
Middle Field	0	7	7
Venango-Clarion	0	32	32
Butler-Armstrong	7	13	20
S. W. Pa.	5	21	26
West Virginia	40	112	152
S. E. Ohio	31	92	123
Total April	108	396	504
Total March	127	370	497
Difference	19	26	7

WELLS COMPLETED
ALLEGANY FIELD

Forest Oil Corp., 3 oil wells 3
Forest Oil Corp., 1 water well ..... pressure
Fee, L. W. Shaner et al 1
Fee, J. A. Bucher 1
Fee, Cuba Nat. Bank No. 25 1
Fee, M. J. Crowley et al 5
H. Cass et al, Beckwith Bros. 1
Fee, Childs & Bartoo 2
Fee, Hill, Hughes & Keller 2
J. E. Karl et al, Karl-Weller Oil Corp. ... 1
J. E. Karl et al, Karl-Weller Oil Corp. ... wtr
Fee, Messer Oil Corp. 2
Herrick & Shaner, N. V. V. Franchot 2
Zaph fee, Sepany Oil 8
Volki fee, Stephan, Gallets & Buffington 2
Warters, Minderler & Phillips 1
Fee, Mary Lippert 5
Fee, Ryder & Richmond Oil 2
Fee, Ryder & Richmond Oil 2
Fee, Ryder & Richmond Oil 2
Fee, Ryder & Richmond Oil 2
Stewart, Sepany Oil 5
Fee, N. V. V. Franchot 3
Fee, N. V. V. Franchot 1
Fee, N. V. V. Franchot 6
Zeliff, Carmody & Fesenmyer 1
Fee, Carr Oil 1
Fee, Ryder & Richmond Oil 1
Fee, Ryder & Richmond Oil 1
Fee, Ryder & Richmond Oil 1
Fee, Ryder & Richmond Oil 1

Wells completed 33
Production 66

BRADFORD FIELD

Tract 22, Hazelwood Oil Co. 52 1
Plan A Tract 23, Hazelwood Oil Co. 06 ..... pressure
Plan A Tract 23, Hazelwood Oil Co. H7.. 1
Plan A Tract 23, Hazelwood Oil Co. H9.. 1
Plan A Tract 23, Hazelwood Oil Co. H18. 1
Tract 28, Hazelwood Oil Co. 76 1
Plan A Tract 23, Hazelwood Oil Co. 010 ..... pressure
Plan A Tract 23, Hazelwood Oil Co. 07 ..... pressure
Plan A Tract 23, Hazelwood Oil Co. 136. 1
Tract 23, Hazelwood Oil Co. 145 1
Plan A Tract 23, Hazelwood Oil Co. 129. 1
Plan A Tract 23, Hazelwood Oil Co. 133. 1
Plan A Tract 23, Hazelwood Oil Co. 141. 1
Plan A Tract 23, Hazelwood Oil Co. 08 ..... pressure
Plan A Tract 23, Hazelwood Oil Co. 09 ..... pressure
Plan A Tract 23, Hazelwood Oil Co. 147. 1
Plan A Tract 23, Hazelwood Oil Co. 148. 1
Bing. 450-474, S. P. O. Co. 101 1
Bing 533, S. P. O. Co. 104 1
Bing. 439, S. P. O. Co. 120 1
H. E. Smith, S. P. O. Co. 184 1
Kinzua Wells, S. P. O. Co. 02 ..... pressure
Bingham, 533, S. P. O. Co. 106 1
Bingham, 387, S. P. O. Co. 12 1
Bingham 400 acres, S. P. O. Co. 93 1
Burdick, S. P. O. Co. 66 1
Burdick, S. P. O. Co. 012 ..... pressure
Lee, Hallock and Weston, S. P. O. Co. 105 1
Bingham, 306, S. P. O. Co. 2 ..... gas
Lot 14, S. P. O. Co., 02 ..... pressure
Burdick, S. P. O. Co. 64 1
Burdick, S. P. O. Co., 09 ..... pressure
Burdick, S. P. O. Co., 69 1
Bingham, 151-154, S. P. O. Co. 43 1
B. I. Taylor, S. P. O. Co. 35 1
Forest Oil Corp., 11 oil wells 11
Forest Oil Corp., 8 water wells ..... pressure
Forest Pet. Corp., 11 oil wells 11
Forest Pet. Corp., 20 water wells .. pressure
F. P. Lawton, Esther Oil Co., Inc. 73 .. 1
F. P. Lawton, Esther Oil Co., Inc. 74 .. water
Bingham 46, P. S. Pringle 28 1
Bingham 430, Lane No. 1 et al 28 8
Bingham 389, D. W. Daly 21 5
Bingham 389, D. W. Daly 61 5
Bingham 291, Howard and McCollum 93 2
Bingham 392, Hooper and Elder 32 1
Bingham 432, J. A. Hopper 17 1
Bingham 386, Simpson et al 55 ..... water
Bingham 386, Simpson et al 56 1
Bingham 386, Simpson et al 57 ..... water
Bingham 386, Simpson et al 58 ..... water
Bingham 386, Simpson et al 59 3
Bingham 386, Simpson et al 60 ..... water
Riddell estate, South Penn Oil Co. 3
Riddell estate, South Penn Oil Co. .... water
Riddell estate, South Penn Oil Co. 2
Riddell estate, South Penn Oil Co. .... water
Fee, W. T. Piper et al 2
Fee, M. C. Raot 2
Bingham, Associated Producers Co. 1
M. A. Dennis, Dennis et al 1
Fee, Brown & Miller 1
N. V. V. Franchot, Robert Jones 1
N. V. V. Franchot, DeGolier & Nichols.. 1
Fee, F. H. Tapp 2
Fee, J. A. Walters estate 7
Fee, T. H. Kennedy 2
Franchot, G. W. Crooks estate 2
Fee, Healey Petroleum Corp. 1
Fee, Healey Petroleum Corp. 1
Fee, L. G. Dana 3
Griffith et al, Tanner & McKean Co. Tr. Co. No. 40 5
Quintuple, Jane Zane estate 3
Bingham 184, Associated Producers Co... 2
Bingham 453, South Penn Oil Co. 1
Bingham 400, South Penn Oil Co. 1
Bingham 214, Associated Producers Co... 5
Bingham 212, Associated Producers Co... 5
Bingham 214, Associated Producers Co... 8
Bingham 212, Associated Producers Co... 4
Bingham 151, South Penn Oil Co. 3
Bingham 568, Associated Producers Co... 10
Bingham 533, South Penn Oil Co. 4
Bingham 533, South Penn Oil Co. 2
Bingham 439, South Penn Oil Co. 5
Bingham 533, South Penn Oil Co. 8
Bingham 547, Alma B. Collins ..... water
Pearl M. Diament, Roy E. Diament 3
Fee, W. C. Kennedy Co. 5
Fee, South Penn Oil Co. 12
Bingham 186, Hazelwood Co. 1
Bingham 395, South Penn Oil Co. 2
Bingham 405, South Penn Oil Co. 1
Bingham 390, South Penn Oil Co. 3
Bingham 472, Grant & Mohan ..... water
Bingham 576, South Penn Oil Co. 3
Bingham 580, Associated Producers Co... 6
Southard, A. L. and L. M. Lilly 1
Kenyon, Minnich estate 3
Werthman, L. G. Schenfield 2
Fee, Sunny Oil 2
Borden, T. B. Wilson 3
Kepp, T. H. Kervin, Jr. 2
Borden, T. B. Martin 2
Meldrum, A. H. Wiborg 3
Meldrum, A. H. Wiborg 3
Meldrum, A. H. Wiborg 3
Borden, W. B. Miller 1
Norton, Kahle Oil 2
Fee, E. M. Daly 2
Duke, Penna. Pet. 2
Gilfillar, J. Wormer 7
Jack, H. F. and C. Jack 5
Bingham, Jones et al 3
Devlin, B. Devlin 3
Huntington, Evans & Wood 2
Huntington, Evans & Wood 2
Melvin, South Penn 1
Melvin, South Penn 1
Whipple, South Penn 2
Devlin, Penn Bradford Oil 3
Simpson, G. A. Simpson 4
Simpson, G. A. Simpson 4
Simpson, G. A. Simpson 4
Simpson, G. A. Simpson 3
Simpson, G. A. Simpson 3
Fee, Hope Oil 2
Fee, Hope Oil 2
Bingham, J. L. Yerdon 2
Hamlin, S. H. Elder & Co. 1
Melvin, S. P. O. 1
Enterprise B. & P., S. P. O. ..... pressure
D. M. Cotton, S. P. O. 1
Whipple, S. P. O. 1
Whipple, S. P. O. 1
Tract 1, Hazelwood Oil Co. 1
Tract 1, Hazelwood Oil Co. 1
Tract 13, T. H. Kennedy 2
Brooks, F. M. Brooks 1
Corwin, Cora M. Simon 2
Borden, W. T. Piper 1
Stinson, Healey Pet. Corp. ..... pressure
Stinson, Healey Pet. Corp. ..... pressure
Stinson, Healey Pet. Corp. 1
Stinson, Healey Pet. Corp. 1
Stinson, Healey Pet. Corp. 1
Gilpin, T. P. Thompson, Jr. 1

Wells completed 193
Production 308

MIDDLE FIELD

Lot 109, Clarendon P. & R. 1
Lot 107, J. M. Sharp 1
McWilliams, Nelson & Johnson 1

Wells completed 3
Production 3

VENANGO-CLARION

McLaughlin, Thomas McLaughlin 15... gas
Confer, Fryburg Motor 1 ..... gas
Bush, Fryburg Motor 2, 3 ..... gas
Kahle, Fryburg Motor 1 ..... gas
Foster, Smith & O. C. Nat'l Bank 19... 1
Huff, R. F. Whitling 18 1
Melford, South Penn Oil 27 1
Melford, South Penn Oil 28 1
Melford, South Penn Oil 29 1
Brown, P. H. Speerstra 12 1
Waid, H. C. & L. M. Graham 25 1
Hoffman, M. R. Hoffman 19 2
Frank, C. A. Frank 10 1
Coast, Riddle, Covert et al 2 1
Stiles tract 74, S. Y. Ramage acct. 2, 84 1
Tract 82, Brundred Oil 71 1
Tract 82, Brundred Oil 72 1
Myers & Shaffer, O. C. Nat'l Bank 4... 1
Berringer, H. H. Craig et al 1 2
Surrena, C. Surrena 25 5
Henderson, S. Y. Ramage, Jr., 51 1
Clarion—
Whitling, Hog Bock Oil & Gas 1 ..... gas
Fry, Freman Oil 4 3
Smith, K. L. Smith et al 3 ..... gas
Henry, Parker Drilling 2 1
Knappenberger, J. W. Knappenberger et al 5 2
Hess, H. J. Crawford 17 2
Detwiller, Alum Rock Gas 4 1
Shirey, Whitling et al 1 1
Meherten et al, F. C. Deemer 6 1
Meherten et al, F. C. Deemer 7 1
Whitling, Whitling & Sone 6 1

Wells completed 33
Production 36
Gas 7

BUTLER-ARMSTRONG

Morgan, Kohlmeyer-Morgan et al 5 .. 1
Blair & Stewart, Blair & Stewart 7 4
Christie, Joseph Grieff 3 ..... dry
Boartz, McKees Rock C. & G. 1 ..... dry
Heasley, Unknown 1 ..... gas
Swartzlander, H. L. Swartzlander 1 .. gas
Martin, Leo P. Neff et al 1 1
Galla, Burton Bros. 1 ..... gas
Doerr, Lang & Co. 1 4
Shaner, W. M. Ruby et al 19 2
Finkler, McCandless et al 1 ..... dry
Gallagher, Gallagher & Co. 1 ..... dry
Marshall, G. K. & H. L. Marshall 3 .... gas
Scott, Garvin & Gettman 1 3
Byers, Guy Sutton 13 1

Wells completed 15
Production 16
Dry 4
Gas 4

SOUTHWEST PENNSYLVANIA
WELLS COMPLETED
BUTLER COUNTY

Harvey, Phillips G. & O. Co. 4 10
McFarlan, Phillips G. & O. Co. 2 15
Trees, Bream & Trees 5 30
Ginsleberger, Cypher & Co. 1 ..... dry
Price, Elliott & Reimer 2 ..... gas
F. Harvey, Reimer & Co. 1 ..... gas

ALLEGHENY COUNTY

Hemphill, Hemphill & Co. 1 5
Clouse, Rodgers & Co. 1 ..... dry
Verona Tool Co., Verona Tool Co. 1 .... gas

BEAVER COUNTY

Economy Tract, Laughner O. & G. Co. 95 10
Todd, L. Reed 1 ..... gas

GREENE COUNTY

Fox, Carnegie Gas Co. 1 ..... gas
Stewart, Greensboro Gas Co. 1, 2 ..... gas
Longnaker, J. L. Garad 6 1
Rutan, Consumers Fuel Co. 5 15
Addleman, Peoples Gas Co. 1 20

Wells completed 16
Production 106
Dry 2
Gas 6

WEST VIRGINIA
WELLS COMPLETED
HARRISON COUNTY

Williams, Salem Concrete Co. 1 ..... gas
Dennison, Burk & Dennison 1 ..... gas

MARION COUNTY

Fluharty, Owens B. & M. Co. 1 ..... gas
Haddox, Continental Oil Co. 2 ..... dry
Thorn, J. J. Allen 1 ..... gas

WETZEL AND TYLER COUNTIES

Pettit, Phila. Oil Co. 4 ..... gas
Conaway, Carnegie Gas Co. 7 ..... dry
Cole hrs., Pure Oil Co. 2 ..... gas
Smith, J. H. Pentz 2 ..... dry

HANCOCK COUNTY

Campbell, Jesse Miller 1 ..... gas

DODDRIDGE COUNTY

Powers hrs., W. L. Travis 1 ..... gas

RITCHIE COUNTY

Bayne, Imperial O. & G. Co. 1 ..... dry
Mount, Burke O. & G. Co. 104 2
McCullough, Choughill & Co. 6 20
Shrader, Hudson & Co. 2 ..... dry
Rexroad, Reno Oil Co. 1 ..... dry
Miller, Miller Farm Oil Co. 1 ..... dry

GILMER COUNTY

Kelly, Kelly & Co. 1 10
Ellis, So. P. O. Co. 4 35
Riddle Bros., McCall Drlg. Co. 2 2

CLAY COUNTY

B. S. G & S., Virginian O. & G. Co. 12.. 30
B. S. G. & S., Virginian O. & G. Co. 6... 20

WOOD COUNTY

Smith, C. L. Smith 1 ..... gas
Coplin, Coplin Farm Oil Co. 4 2

PLEASANTS COUNTY

Reynolds, Carter & Rinehart 2 ..... dry
Russell, Reynolds & Co. 1 ..... dry
Hentzelman, Dinsmoor & Co. 5 ..... dry
Riggs, Riggs Oil Co. 3 3

ROANE COUNTY

Stockly, South Penn Oil Co. 91 415
Stockly, South Penn Oil Co. 85 5
Stockly, South Penn Oil Co. 90 5
Nixon, South Penn Oil Co. 7 10
Nixon, South Penn Oil Co. 8 10
Boggs, Virginian G. & O. Co. 7 5
Goff, Hope C. & R. Co. 1 1
Craig-Bartlett, Hope C. & R. Co. 2 .... gas
Vandall, Fed. O. & G. Co. 3 5

CALHOUN COUNTY

Weaver, Dailey, Son & Co. 1 ..... gas
Stump, Lewis & Co. 1 10
Hall, Lewis & Co. 1 ..... gas
Bell, Flannigan-Goff 1 ..... dry
Cabot, G. L. Cabot 1 ..... gas
Betts hrs., W. H. Bickel 6 ..... gas
Maze, Dailey O. & G. Co. 1 ..... gas

JACKSON COUNTY

McCarty, South Penn Oil Co. 4 10
McCarty, South Penn Oil Co. 5 10
Brown, Heck Oil Co. 4 2

LINCOLN COUNTY

H. C. L. & M. Co., U. F. G. Co. 2,517 ... gas
Davis, Downing Gas Co. 1 ..... gas
Nelson, Rashman Bros. 3 ..... gas
Stone, Earl Cameron 2 ..... gas
Standard Fuel Co., Harvard Gas Co. 1.. gas

KANAWHA COUNTY

Pauley, Chartiers Oil Co. 1 ..... dry
King Land Co., U. F. G. Co. 2,512 ..... gas
Blue Creek Land Co., U.F.G. Co. 2,368 gas
Newhause, J. H. Hall, trustee 2 5

MINGO COUNTY

Phillips, F. H. Yates 1 ..... gas
Cowden, F. H. Yates 1 8

BOONE COUNTY

L. R. & P. Tract, Pure Oil Co. 30 20
Federal Coal Co., Pure Oil Co. 35 ..... gas
Federal Coal Co., Pure Oil Co. 36 ..... gas
Federal Coal Co., Pure Oil Co. 37 ..... gas
Federal Coal Co., G. L. Cabot 26 ..... dry
Pryor-Allen, Owens B. & M. Co. 14 ..... gas
H. C. L. & M. Co., U. F. G. Co. 1,995 .. gas
Crane, S. Workman 7 ..... gas
Stone, Cameron O. & G. Co. 1 ..... gas

CABELL COUNTY

Hall, Larner Gas Co. 1 ..... gas

PUTNAM COUNTY

Sweitzer, Sol. Gas Co. 2 ..... gas

Wells completed 69
Production 516
Dry 13
Gas 32

SOUTHEAST OHIO
WELLS COMPLETED
MONROE COUNTY

Ward, F. H. Ward & Co. 3 ..... dry
English, English & Co. 2 5
Dean, Paine & Co. 2 ..... dry
Shafer, Shafer Farm Oil Co. 1 1

PERRY COUNTY

Bennett, Yu-La-Kan Oil Co. 1 5
Griggs, Sturm & Co. 1 3
Bowman, Preston Oil Co. 1 ..... dry
Crist, Preston Oil Co. 3 45
H. V. P. Co., Chartiers Oil Co. 310 40
Burley-Winter, Cline & Co. 6 5
Brown, Ohio F. G. Co. 1 ..... gas
May-Watts, Ohio F. G. Co. 1 ..... gas
Turner, Pure Oil Co. 2 105
Driggs, Leonard O. & G. Co. 2 10

MUSKINGUM COUNTY

Combs & Co., Lupher, Denmab & Co. 1. dry
Knight, Prypmiller Oil Co. 2 5
Allen, Preston Oil Co. 1 ..... dry
Bateman, Saunders & Co. 1 ..... dry
Allied Coal Co., Athey Drilling Co. 1 .. gas
Deery, Preston Oil Co. 1 ..... gas
Tilton, Rymniiper Oil Co. 1 ..... dry
Fulk, Ohio F. S. Co. 1 ..... gas

MORGAN COUNTY

Tharp, Hopewell Fuel Gas Co. 1 80

HOCKING COUNTY

Milbrim, Gordon Oil Co. 5 35
Stone, Gordon Oil Co. 9 40
Rhingenscheidt, Preston Oil Co. 2 15
Thrush, Rauber Oil Co. 5 10
Miller, Preston Oil Co. 4 195

GUERNSEY COUNTY

Moore, Craig & Souls 1 20
Alloway, Preston Oil Co. 2 ..... gas
Rude & Co., Gardner & Co. 1 ..... dry
Alloway, East Ohio Gas Co. 1 50
Wiggington, Preston Oil Co. 2 ..... dry

HOLMES COUNTY

Leadbetter, East Ohio Gas Co. 3 ..... gas

COSHOCTON COUNTY

Schelbe, Logan Gas Co. 1 25
Russell, Leonard O. & G. Co. 1 3

LICKING COUNTY

Hoover Bros., Pure Oil Co. 5 125
Ashcraft, M. F. Whitehill 8 15
Helphrey, Hope C. & R. Co. 5 75
McKee, Pure Oil Co. 1 65
Martin, Emerald Pet. Co. 4 15
Young, Ohio-Penn Gas Co. 2 ..... dry
Axline, Whit Mar O. & G. Co. 1 ..... dry
Johnson, Ohio F. S. Co. 1 ..... gas
Loughman, Pure Oil Co. 1 30
Coomes, Hope C. & R. Co. 2 70
Weiss, Emerald Pet. Co. 1 15

VINTON COUNTY

Martin, Kuntz & Co. 1 1
Brooks, Co-operative Oil Co. 1 6
Houston, Townsend & Co. 2 6

ATHENS COUNTY

Jones, Wiser Oil Co. 1 ..... dry
Jones, Bode & Co. 2 ..... gas
Green, D. T. Ornsoff & Co. 1 ..... gas
Woodyard, Woodyard & Co. 8 1

NOBLE COUNTY

Moore, Moors & Co. 4 1
Feldner, Poling & Co. 1 ..... dry
Roher, Stephens & Co. 1 ..... gas
Leasure, G. G. Green 1 ..... dry

MEIGS COUNTY

Deihl, Shipe & Co. 1 ..... gas
Koutz, Pure Oil Co. 3 ..... gas
State of Ohio Lands, Preston Oil Co. 3 2
Carnahan, Twenty-Five Assn. 6 ..... dry
Carnahan, Twenty-Five Assn. 7 15
Pittsburgh Coal Co., Tyree & Co. 1 2
Capehart, B. M. Tyree 1 3

WASHINGTON COUNTY

Mackey, Mackey & Co. 1 ..... dry
Coffman, Coffman & Co. 4 1
Klein, Miracle O. & G. Co. 3 2
Felter, Schramm & Co. 2 2
Walsh, Preston Oil Co. 4 ..... dry

BELMONT COUNTY

Henderson, Preston Oil Co. 7 15
Estep, National Pet. Co. 6 ..... gas

MEDINA COUNTY

Williamson, Easelburn & Co. 3 6

ASHLAND COUNTY

Devennie, Robinson Bros. 1 20
Devennie, Robinson Bros. 2 10
Devennie, Robinson Bros. 3 ..... gas

Wells completed 76
Production 1167
Dry 17
Gas 15

CENTRAL OHIO FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Ashland	16	127	7	6	9	19	28
Medina	2	7	0	1	3	5	8
Lorain	4	0	2	2	4	4	8
Wayne	5	0	2	3	2	6	8
Holmes	2	0	0	2	4	6	10
Cuyahoga	0	0	0	0	0	1	1
Ashtabula	0	0	0	0	0	2	2
Richland	1	0	1	0	5	3	8
Knox	2	0	0	2	3	8	11
Coshocton	3	48	0	1	4	4	8
Summitt	10	30	4	5	4	13	17
Licking	10	213	1	1	7	11	18
Muskingum	9	210	4	2	5	12	17
Athens	15	0	2	13	5	14	19
Meigs	6	17	1	1	4	16	20
Jackson	4	0	0	4	9	10	19
Vinton	2	20	0	1	1	2	3
Pickaway	0	0	0	0	0	1	1
Lawrence	0	0	0	0	0	2	2
Gallia	1	0	0	1	0	2	2
Stark	2	0	1	1	0	4	4
Fairfield	0	0	0	0	1	6	7
Guernsey	6	50	3	2	6	4	10
Total April	100	722	28	48	76	155	231
Total March.	92	679	28	42	85	150	235
Difference ..	8	43	0	6	9	5	4

WELLS COMPLETED
ASHLAND COUNTY

Greene—Bertha Peters, Ohio Fuel Gas 1-3444 22
John Coawn, Logan Gas 2-3032 ..... gas
Orange—Carl B. Jones, Logan Gas 2-3079 ..... gas
I. C. Richards, Logan Gas 1-3067 .. dry
W. W. Barnhill, Logan Gas 1-3077 .. gas
J. M. Fluke 22, The Kemrow Co. 4 .. gas
Lake—Emma Devinney, Robinson & Co. 2 100
Emma Devinney, Robinson & Co. 3 gas
John Cable, Robinson & Co. 1 ..... dry
W. S. Snyder, The Kemrow Co. 1 .. dry
Perry—L. H. Smalley, Robinson & Co. 2 5
Ed. Gardner, McIntyre & Co. 2 ..... dry
Mohican—Hattie B. Metcalf, Logan Gas 1-3085 ..... dry
J. J. Winbigler, Jones & Co. 5 ..... dry
Geo. Obrecht, Smith & Faulkner 2 .. dry
Mrs. Jas. Chesrown, O. W. Zink & Co. 1 ..... gas

Wells completed 16
Production 127
Dry 7
Gas 6

MEDINA COUNTY

Chatham—J. & A. Jelenceas, East Ohio Gas 3 7
Harris—W. W. Wood, Harmon & George 2 ..... gas

Wells completed 2
Production 7
Gas 1

LORAIN COUNTY

Grafton—J. T. April, Chemical Oil & Gas 2 ..... dry
Eaton—F. L. Nobles, Ohio Fuel Gas 2-3468 ..... gas
Carlisle—Julia A. Clark, Ohio Fuel Gas 1-3463 ..... gas
Lagrange—Wesley Tran. Ohio Fuel Gas 1-3446 ..... dry

Wells completed 4
Dry 2
Gas 2

WAYNE COUNTY

Congress—Wm. Swope, Ohio Fuel Gas 1-3425 ..... gas
C. T. Myers, Ohio Fuel Gas 1-3436.. gas
G. V. Kline, Ohio Fuel Gas 1-3435.. dry
H. Esselburn, Garn-Woodward Oil 2 dry
Wooster—Calvin Fry, The Kemrow Co. 7 gas

Wells completed 5
Dry 2
Gas 3

HOLMES COUNTY

Paint—J. Harshberger, Ohio Fuel Gas 1-3424 ..... gas
Richland—C. O. Ledbetter, East Ohio Gas 3 ..... gas

Wells completed 2
Gas 2

RICHLAND COUNTY

Monroe—W. E. Pritchard, Ohio Fuel Gas 1-3459 ..... dry

KNOX COUNTY

Brown—J. A. Reed 10, Ohio Fuel Gas 4-3465 ..... gas
J. A. Reed 11, Ohio Fuel Gas 1-3469 gas

Wells completed 2
Gas 2

COSHOCTON COUNTY

Monroe—E. McKelvey, The Ohio Oil 1 gas
Clark—Victor Shiebe, Logan Gas 1-3070 36
Pike—Isaac Russell, Leonard O&G 2 12

Wells completed 3
Production 48
Gas 1

SUMMITT COUNTY

Franklin—G. Hemstetter, East Ohio Gas 1 ..... gas
Graber Allotment, Cammeron & Co. 1 dry
Clara Raber, F. A. Brendall & Co. 1 gas
Greene—M. L. Kepler, F. A. Brendall & Co. 1 30
Carl Swartz, F. A. Brendall & Co. 1 gas
John King, F. A. Brendall & Co. 1 dry
Herb Boettler, F. A. Brendall & Co. 1 gas
G. Chenowe.h, East Ohio Gas 1.... dry
C. L. Hatcher, East Ohio Gas 1.... dry
Richfield—Geo. Hess, East Ohio Gas 1 gas

Wells completed 10
Production 30
Dry 4
Gas 5

LICKING COUNTY

Fallsburg—U. A. Moran, Husle & Kundtz, 1 ..... dry
Ashcarft, Preston Oil 6 2
Jacob Weiss, Emerald Petroleum 1.. 80
J. E. Martin, Emerald Petroleum 4 5
Bowling Green—Noah Johnson, Ohio Fuel Gas 1-1538 ..... gas
Perry—Ollie Lear, Preston Oil 4 5
A. A. Ashcraft, Whitehill Oil 1 .. 12
Hanover—J. A. Griffin, Hope Construction & Refg. 2 3
Hopewell—Noah Coomes, Hope Construction & Refg. 2 70
Henry Loughman, The Pure Oil 2.. 32

Wells completed 10
Production 212
Dry 1
Gas 1

MUSKINGUM COUNTY

Jackson—W. E. Helphrey, Hope Construction & Refg. 5 75
Otis McKee, The Pure Oil 1 60
Perry—Harry E. Dutro, Rymilper Oil 1 75
E. H. Berry, Ohio Fuel Gas 1-3467 gas
Ed P. Allen, Ohio Fuel Gas 1-3400.. dry
Wm. Knight, Mid-East Oil 2 ..... dry
Clay—Ray Stine, Wm. Kline & Co. 1.. dry
Washington—M. A. Bateman, Bateman Oil 1 ..... dry
Allied Coal, W. Hunter Atha 1 ..... gas

Wells completed 9
Production 210
Dry 4
Gas 2

ATHENS COUNTY

Ames—Theo. Fleming, Ohio Fuel Gas 1-3450 ..... gas
Eurlah Brooks, Ohio Fuel Gas 1-3428 gas
Myrta Green, Orondorff & Co. 2 .... gas
O. D. Jones, Kiggins & Co. 4 .... gas
Dover—Sunday Creek Coal, Logan Gas 67-3042 ..... gas
Berne—E.C. Glass, Ohio Fuel Gas 4-34-75 gas
John B. Elliott, Ohio Fuel Gas 2-3457 gas
W. C. Wells, Bailey Oil & Gas 3.... gas
O. D. Jones, Wiser Oil 1..... gas
Carthage—C. C. Snodgrass, Ohio Fuel Gas T2,523 ..... dry
Loona T. Runion, McFarr & Cody 2.. gas
Lodi—W. A. Swartz, Ohio Fuel Gas 2-3464 ..... dry
T. R. Phillips, Ohio Fuel Gas 2-3476.. gas
Frank Sargent, Ohio Fuel Gas 1-3483 gas
Troy—H. K. Winters, Ohio Fuel Gas 1-3373 ..... gas

Wells completed 15
Dry 2
Gas 13

MEIGS COUNTY

Sutton—State of Ohio, Ohio Fuel Gas 3-2437 4
Martin Eberback, Tyree & Co. 1.... 2
Wm. Carnahan, Tyree & Co. 6..... dry
Wm. Carnahan, Tyree & Co. 7..... 8
Hanna Capehart, Penn Gri. Oil 1... 3
Salisbury—Dollie A. Diehl, W. H. Sipe & Co. 1 ..... gas

Wells completed 6
Production 17
Dry 1
Gas 1

JACKSON COUNTY

Franklin—Leo Evans, Penn Oil Gas 5. gas
Milton—J. C. Washburn, Ohio Fuel Gas 1-3417 ..... gas
Lick—Sabine Jenkins, Ohio Fuel Gas 1-3262 ..... gas
L. T. Rice, Ohio Fuel Gas 1-3363.... gas

Wells completed 4
Gas 4

VINTON COUNTY

Knox—Garfield Brooks, Co-Operative Oil 2 20
David Huston, Townsend & Co. 2.... gas

Wells completed 2
Production 20
Gas 1

GALLIA COUNTY

Addison—Johnis Brothers, Halstead & Kenney 1 ..... gas

STARK COUNTY

Lawrence—N. H. Albright, McClay Bros. 1 ..... dry
Geo. Brickel, Penn Oil & Gas 1..... gas

Wells completed 2
Dry 1
Gas 1

GUERNSEY COUNTY

Wheeling—W. J. Alloway, Logan Gas 2-3074 ..... gas
Wilbur Wilson, East Ohio Gas 1.... 50
Wm. Miles, Blackstone & Co. 1.... dry
Westland—A. Kerr, Cambridge Glass 2 gas
Jefferson—Sam D. L. Gardner, R. D. Hood & Co. 1 ..... dry
Jackson—C. C. Wiggington, Ohio Fuel Gas 3-3478 ..... dry

Wells completed 6
Production 50
Dry 3
Gas 2

INDIANA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Adams	0	0	0	0	0	2	2
Delaware	0	0	0	0	0	1	1
Gibson	1	0	0	1	0	5	5
Fike	2	0	0	2	0	1	1
Daviess	0	0	0	0	0	2	2
Vigo	1	150	0	0	0	0	0
Sullivan	2	5	1	0	0	3	3
Spencer	1	2	0	0	0	6	6
Dubois	0	0	0	0	0	2	2
Warrick	0	0	0	0	0	2	2
Knox	0	0	0	0	0	1	1
Benton	0	0	0	0	0	1	1
Fountain	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	1	1
Wabash	0	0	0	0	0	1	1
Greene	1	0	1	0	0	2	2
Crawford	0	0	0	0	0	1	1
Perry	0	0	0	0	3	6	9
Posey	0	0	0	0	0	1	1
Vandeburg	0	0	0	0	0	1	1
Lagrange	0	0	0	0	0	1	1
Morgan	0	0	0	0	0	1	1
Starke	0	0	0	0	0	1	1
Martin	0	0	0	0	0	1	1
Total April .	8	157	2	3	5	44	49
Total March.	12	70	3	5	3	44	47
Difference ..	4	87	1	2	2	0	2

WELLS COMPLETED
JAY COUNTY

Bear Creek—James Hews, Rebecca M. Keith, 1, 7 ..... abd
M. Campbell, Rebecca M. Keith 2.. abd
Hartford—J. F. Mosser, D. Ambroson 4 5 abd
W. J. Morton No. 1, D. Ambroson 6, 7, 8 ..... abd
Arabella Scott, D. Ambroson 1 .... abd

Abandoned 9

GIBSON COUNTY

Columbia—Geo. Allen, Roxana Petroleum 1 ..... gas
Barton—Henry Raiborn, Gem Oil Corp 1 abd
Sam D. Barrett, Gem Oil Corp. 1.. abd

Wells completed 1
Gas 1
Abandoned 2

PIKE COUNTY

Clay—Neal Lindy, Mahutska Oil 1.... gas
Washington—F. Gettinger, Bement Gas 1 ..... gas
Madison—Rufus Morton No. 2, The Ohio Oil 1 ..... abd

Wells completed 2
Gas 2
Abandoned 1

VIGO COUNTY

Prairie Creek—F. J. Williams, Siosi Oil Corp. 6 150

SULLIVAN COUNTY

Gill—G. W. Buff, Geo. W. Buff & Co. 1 5
W. E. Maple, Morris, Whitlock & Co. 1 ..... dry

Wells completed 2
Production 5
Dry 1

SPENCER COUNTY

Jackson—Dr. Hoover, D. D. Flannagan 4 2

GREENE COUNTY

Stockton—B. A. Rose, Fletcher, Mosier & Co. 1 ..... dry

LIMA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Wood	3	55	0	1	5	6	
Hancock	3	50	0	1	1	2	3
Allen	2	25	1	0	2	2	4
Auglaize	0	0	0	0	0	1	1
Mercer	1	2	0	0	0	2	2
Seneca	2	12	1	0	2	2	4
Lucas	1	0	0	1	0	0	0
Hardin	3	0	2	1	0	0	0
Shelby	1	10	0	0	0	0	0
Wyandot	0	0	0	0	1	1	2
Huron	0	0	0	0	0	1	1
Total April .	16	154	5	3	7	16	23
Total March.	6	81	1	1	2	20	22
Difference ..	10	73	4	2	5	4	1

WELLS COMPLETED
WOOD COUNTY

Montgomery—Louy & Joara, Edmonds & Keister 8, 9 ..... 4 abd
M. Reynolds, North Ohio Oil & Gas 1, 2, 3, 4 ..... abd
M. Adams, North Ohio Oil & Gas 1, 2, 3 ..... abd
Lake—Si Archerberger, Lantz, Schulte & Co. 1 5
Perry—H. Brandeberry, Glass & Sheilenberger 1 50
Troy—C. J. Miller, Chas. Ziesing & Co. 1 ..... dry

Wells completed 3
Production 55
Dry 1
Abandoned 9

HANCOCK COUNTY

Delaware—O. S. Bell, Wat.s & Harmon 1 ..... gas
Eagle—Frank Freed, R. T. Rittenhouse 7 25
Alice Stauffer, Star & Clark 11.... 25

Wells completed 3
Production 50
Gas 1

ALLEN COUNTY

Bath—Milo Roberts, J. W. Davis -.. dry
Richland—Wm. G. Leiber, Wm. G. Leiber 4 25
Marion—Good-Tucker, M. P. Colt 3, 5, 7, 8, 9, 12, 14, 15, 16, 18, 19.... abd

Wells completed 2
Production 25
Dry 1
Abandoned 11

SANDUSKY COUNTY

Scott—Bob Hutton, Minnie M. Hutton No. 2 farm 16, 17 ..... abd

Wells abandoned 2

MERCER COUNTY

Center—F. L. Purdy, Wm. B. Lawrence Jr. & Co. 1 2

SENECA COUNTY

Pleasants—A. Haught, Hulst & Kundts 1 ..... dry
Jackson—F. H. Ropp, Columbus-Tiffin Oil & Gas 1 12

Wells completed 2
Production 12
Dry 1

LUCAS COUNTY

Waterville—Liza Hutchinson, Waterville Gas & Oil 1 ..... gas

HARDIN COUNTY

Jackson—L. Dickelman, Kurtz Oil 4.. gas
Wm. Kurtz, Forest Gas Co. & Co. 2 dry
W. F. Kurtz, The Kurtz Gas Co. 3.. dry

Wells completed 3
Dry 2
Gas 1

SHELBY COUNTY

Cynthian—F. M. Sherman, Ellerman Oil 2 10

ILLINOIS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Clark	1	0	1	0	1	2	3
Crawford	1	4	0	0	1	4	5
Lawrence	1	0	1	0	0	2	2
Wabash	3	100	2	0	0	3	3
St. Clair	4	80	3	0	0	6	6
Saline	0	0	0	0	0	4	4
Monroe	0	0	0	0	0	1	1
Effingham	0	0	0	0	0	1	1
Total April .	10	184	7	0	2	23	25
Total March.	17	167	9	0	2	17	19
Difference ..	7	17	2	0	0	6	6

WELLS COMPLETED
CLARK COUNTY

Johnson—J. Connelly, W. C. McBride Inc. 4 ..... dry

CRAWFORD COUNTY

Licking—Marks & Craft, Walter Squires & Co. 5 4

LAWRENCE COUNTY

Dennison—I. B. Thompson, Smith & Co. 1 ..... dry

WABASH COUNTY

Wabash—Sam Bailey, Highland Oil & Gas 1 ..... dry
Hannington Estate, Risley & Co. 1 dry
W. M. Price, Ridge Farm Oil 6 100

Wells completed 3
Production 100
Dry 2

ST. CLAIR COUNTY

Sugar Loaf—C. Mansette, Morris & Yeager 1 80
I. S. Gaskill, Ohio Oil 1 ..... dry
H. Otten hrs., Timberlake & Alspaugh. 1 ..... dry
Tilda Becker, Mt. Vernon Oil & Gas Dev. 1 ..... dry

Wells completed 4
Production 80
Dry 3

MARION COUNTY

Centralia—W. Hutchison, Whittenburg & Co. 1 ..... abd
N. J. Lutz, Miller & Co. 1 ..... abd

Abandoned 2

MICHIGAN FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Muskegon	41	15,969	3	2	69	63	132
Kent	0	0	0	0	1	2	3
Ottawa	1	0	1	0	0	4	4
Oceana	1	0	1	0	2	4	6
Isabelle	3	1,118	0	0	1	8	9
Midland	2	0	2	0	1	3	4
Newyago	1	0	1	0	3	5	7
Mason	0	0	0	0	1	4	5
Livingston	0	0	0	0	0	2	2
Van Buren	0	0	0	0	2	1	3
Shiawassee	0	0	0	0	0	1	1
Crawford	0	0	0	0	0	1	1
Montcalm	0	0	0	0	1	0	1
Sanilac	0	0	0	0	0	1	1
Alpena	0	0	0	0	0	1	1
Allegan	0	0	0	0	1	0	1
Tuscola	0	0	0	0	0	1	1
Huron	0	0	0	0	0	1	1
Cass	0	0	0	0	0	1	1
Mecosta	0	0	0	0	1	1	2
Lake	0	0	0	0	0	1	1
Total April .	49	17,087	8	2	82	105	187
Total March.	31	11,935	8	3	79	92	171
Difference ..	18	5,152	0	1	3	13	16

WELLS COMPLETED
MUSKEGON COUNTY

Muskegon—Figge, Dixie Oil 8..... 15
A. Luinstra, Globe Oil 1..... 800
Fee, Continental Motors Corp. 9.... dry
Fee, Continental Motors Corp. 11... 6
Jac. Lewis, Concord Oil & Gas 1.. 250
Giles, Natural Gas & Oil 1..... 500
Engeman, Kent-Muskegon Oil 1.... 100
H. Heinz, Muskegon Oil Corp. 5.. gas
Nichols, Citizens-Lake Shore Pet. 2 gas
Yonker, Muskegon Oil Corp. 1..... 100
Gilbert, Swastika Oil & Gas 1..... 100
Gilbert, Swastika Oil & Gas 2..... 600
Giles, Swas.ika Oil & Gas 2..... 360
Giles, L. E. Kennedy 2..... 250
Koning-Borts, L. R. Menley & Co. 1 750
John Smith, Travers Oil 1..... 100
Durham, Cochran & Howard 1..... 20
Cook, Melbohaco Oil 1..... 8
M. F. Kieft, Paramount Oil 1..... 300
Nichols, Muskegon Oil Corp. 2..... 60
Laketon—C.E.Horton, Nelson & Witt 1.2000
Geo. Fenner, Nelson & Witt 1..... 300
Geo. Fenner, Nelson & Witt 2..... 350
J. Koning, Puritan-Majestic Oil 1.. 800
DeGroat, Puritan-Majestic Oil 1....1200
Grotefelt, Johnson Oil & Refg. 1.. 50
K. McLaughlin, Dixie Oil 1..... 500

K. McLaughlin, Dixie Oil 2 100
K. McLaughlin, Dixie Oil 3 850
J. D. Ross, Dixie Oil 1 1200
Albert Young, C. W. Marsj & Co. 2 .. 60
G. S. Brand, Betty-Jane Oil Synd. 2 1200
Murphy, Reliable Oil & Gas 1200
Savacool, J. V. Howard 1 250
H. Buteau, Eureka Oil & Gas 1 ... 250
C. Damm, Carl Damm, 2 500
Beegle, Concord Oil & Gas 1 200
Young, Sun Oil 1 ..... dry
Phillip Andree, Nelson & Witt 1.... 600
Frank Cihak, Johnson Oil & Refg. 2 40
Launsetin, Royal Petroleum 1 ..... dry

Wells completed 41
Production 15969
Dry 3
Gas 2

OTTAWA COUNTY

Crockery—Comstock-Kunkle, Ottawa Pet. & Co. 1 ..... dry

OCEANA COUNTY

Shelby—Jerry Zarvel, Muskegon-Dixie Oil 1 ..... dry

ISABELLE COUNTY

Chippewa—McClintic, Leonard Oil & Gas 1 480
Unknown, Rockford Oil Synd. 1.... 538
Jocelyn, Chippewa Oil & Gas 2 ... 100

Wells completed 3
Production 1118

MIDLAND COUNTY

Greendale—Shirts, The Pure Oil 1.... dry
Consumers Power, The Pure Oil 1.. dry

Wells completed 2
Dry 2

NEWYAGO COUNTY

Ashland—O.E. Atwood, Lima Oil Corp. 1 dry

KENTUCKY-TENNESSEE

KENTUCKY

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Warren	3	1	1	1	0	4	4
Allen	4	9	1	0	0	9	9
Barren	0	0	0	0	0	1	1
Ohio	35	1,173	8	1	7	79	86
Daviess	31	765	12	0	1	60	61
Hancock	3	0	2	1	1	6	7
McLean	0	0	0	0	2	4	6
Henderson-Union	0	0	0	0	0	4	4
Webster	1	20	0	0	0	2	2
Hopkins	0	0	0	0	0	8	8
Muhlenburg	1	200	0	0	0	1	1
Breckenridge	0	0	0	0	1	2	3
Butler	0	0	0	0	1	2	2
Meade	0	0	0	0	1	1	2
Christian	0	0	0	0	4	2	6
Hardin	0	0	0	0	0	1	1
Caldwell	0	0	0	0	0	1	1
Adair	0	0	0	0	0	1	1
Wayne	3	2	2	0	0	4	4
Powell	0	0	0	0	0	1	1
Estill	4	15	0	0	0	4	4
Lee-Owsley	0	0	0	0	0	3	3
Wolfe	1	10	0	0	0	1	1
Morgan	0	0	0	0	0	1	1
Johnson-Magoffin	7	45	2	0	0	2	2
Floyd	0	0	0	0	0	4	4
Clay	0	0	0	0	0	2	2
Knox	0	0	0	0	0	1	1
Pike	1	0	0	1	0	0	0
Total April	94	2,240	28	4	18	211	229
Total March	86	2,483	22	6	16	182	198
Difference	8	243	6	2	2	29	31

TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Clay	0	0	0	0	2	8	10
Jackson	0	0	0	0	0	2	2
Marshall	0	0	0	0	1	0	1
Decatur	0	0	0	0	0	2	2
Total April	0	0	0	0	3	12	15
Total March	2	60	0	0	3	12	15
Difference	2	60	0	0	0	0	0

WELLS COMPLETED
WARREN COUNTY

Bowling Green—Frank Travelstead, Wood Oil 1 ..... gas
A. C. Bettersworth, Allen Oil & Gas 2 dry
Hobson hrs., Penn Homa Oil 19 1

Wells completed 3
Production 1
Dry 1
Gas 1

ALLEN COUNTY

Scottsville—G. L. Supenor, J. F. Finch 9 5
W. B. Tabor, Snowden-McSweeney 22 3
M. E. Hood, I. J. Trapp & Co. 2.. 1
L. Beam, E. D. Defenbaugh 4 ..... dry

Wells completed 4
Production 9
Dry 1

OHIO COUNTY

Hartford—Rosette Taylor, Ohio Oil 2 5
Hamilton 176, Cumberland Pet. 16 5
Hamilton 176, Cumberland Pet. 17 5
Hamilton 176, Cumberland Pet. 18 5
Ellis Bartlett, Hupp, Duff & Co. 4.. 180
L. Trodgen, Hupp, Duff & Co. 4 .. 180
L. Trodgen, Hupp, Duff & Co. 5 ... 200
Gossett, James C. Ellis 9 5
Jane Daniels, James C. Ellis, 14 ... 8
B. R. Keith, James C. Ellis, 11 ... 100
W. P. Howard, James C. Ellis 3 ... dry
L. C. McKinley, Leeper Oil 5 30
Ed. Crow, Wheeler & Botts 2 5
J. W. Whittaker, Carpenter & Co. 9 dry
E. Maden, Snowden-McSweeney, 2.. dry
Duke, Snowden-McSweeney 3 100
Nancy Farmer, Sirman Oil 14 30
F. L. Royal, New Domain Oil & Gas 7 50
Cora Wells, Mecca Oil 21 75
O. Ezell, Young & Lee 10 20
Gossett Lane, Globe Oil 1 5
Gossett Lane, Globe Oil 2 5
V. R. Ferguson, Wood Oil 4 ..... dry
J. C. Smith, Wood Oil 9 30
J. W. Thomas, Smith & Fisher 2 .. 15
T. Howard, Carpenter, Cockrell & Co. 1 45
Payton Royal, H. L. Ogle & Co. 2 50
Jess L. Ralph, Jess E. Hare 1 5
Geo. Bowman, Ray Bigler & Co. 2.. dry
J. L. Ralph, Victor Oil 3 10
P. R. Kelley, Armistead Oil 3 ..... gas
Brown hrs., Russell & Rudolph 4.. dry
Allie Evans, H. B. Bastrus & Co. 5 dry
L. Howard, H. B. Bastrus & Co. 1 dry
Henry Greer, S. H. Russell & Co. 1 25

Wells completed 35
Production 1173
Dry 8
Gas 1

DAVIESS COUNTY

Owensboro—J. F. Leet, Creek Drilling 5 70
J. E. Brown, Creek Drilling 3 14
E. Burton, Daley & Lowman, 5... dry
E. L. Baird, Wade & Moore 3 40
E. L. Baird, Wade & Moore 4 40
E. L. Baird, Wade & Moore 5 60
J. E. Boreman, Wade & Moore & Co. 1 dry
H. B. Trodgen, Trognite Oil & Gas 3 100
M. C. Ruby, Eastern Gulf Oil 5... dry
M. C. Ruby, Eastern Gulf Oil 6... dry
W. A. Murray, Eastern Gulf Oil 8.. 15
L. A. Brown, New Domain Oil & Gas 2 dry
Salmon, Huff & Calderwood 5..... 70
Salmon, Huff & Calderwood 6 40
Sophia Stinnett, R. W. McMahon & Co. 1 ..... dry
Chas. A. Rodgers, Sidney Petroleum 1 dry
W. G. Hayden, L. C. Young 8 10
W. G. Hayden, L. C. Young 9..... dry
C. D. Ralph, Chas. Toppino 2 ..... dry
Whitesville Bank, Smith, Randolph & Co. 2 10
Oscar Wells, Smith, Randolph & Co. 10 20
J. D. Ray, L. C. Young & Co. 1.... dry
E. Burns, The Petroleum Co. 12.... 90
E. Burns, The Petroleum Co. 13.... 4
Tony Hansford, The Petroleum Co. 1.. 40
T. T. Martin, Whitmer Oil & Gas 1.. dry
Tate Howard, Jas. C. Ellis & Co. 2 30
Tate Howard, Jas. C. Ellis & Co. 3 dry
Salmon, Cumberland Petroleum 1 ... 70
Alford Sutton, Whitmer Oil & Gas 4 2
Herb Salmon, Radyure, Batton & Co. 2 40

Wells completed 31
Production 765
Dry 12

HANCOCK COUNTY

Pellville—J. Burdette, Wentworth Oil 1 gas
Myrtle Lyons, Alberson, Ramey & Co. 1 ..... dry
W. T. Payne, H. A. Henry, 2 ..... dry

Wells completed 3
Dry 2
Gas 1

WEBSTER COUNTY

Sebree—Curry, E. W. Wilson 2 20

MUHLENBURG COUNTY

Central City—R. O. Kennedy, The Ohio Oil 1 200

WAYNE COUNTY

District 2—Huffaker, B. S. Huffaker 5 dry
Burnett hrs., Superior Oil Corp. 29.. 2
District 13—Owen Rector, Geo. A. Hook & Co. 1 ..... dry

Wells completed 3
Production 2
Dry 2

ESTILL COUNTY

District 8—Simp Horn, Superior Oil Corp. 34 2
Sam Bringar, Superior Oil Corp. 16.. 1
District 17—Calmes & Park, Superior Oil Corp. 1 10
Wm. Cox, A. J. Calvert 12 2

Wells completed 4
Production 15

WOLFE COUNTY

District 20—Bush hrs., A. Gerard & Co. 1 10

JOHNSON-MAGOFFIN COUNTIES

District 25—Harvey Rice, Ralph Safford & Co. 1 ..... dry
J. A. Williams, Ralph Stafford & Co. 1 dry
District 27—Fairchilds hrs., Wagner & Matthews 3 10
Nancy Vanderpool, Baldwin & Morgan 4 2
District 29—Milt Tackett, Hamlin-Tanner Oil 4 3
District 30—Frank Conley, Boston Southwestern Oil & Gas 16 5
District 31—J. M. Frazier, Hupp, Duff, & Co. 8 25

Wells completed 7
Production 45
Dry 2

PIKE COUNTY

Pikeville—Buckley Creek, Unknown 1.. gas

HIGHER GASOLINE TAXES OUTDO ROLLING SNOWBALL

(Continued from Page 156)

carrying the tax, the cost of gasoline was and still is a relatively small part of the cost of operating an automobile.

Danger of Abuse

It is not the character nor the theory of the gasoline levy that is of concern to students of taxation, but the ease with which it lends itself to abuse. Just as soon as legislators found they had a new and convenient way open to them to increase state revenues they began to raise the tax. The result is that today the rate has been advanced in many states until it is far out of proportion to the sales price of the article taxed. If the present tendency continues it will be only a question of time until the public revolts. It is strange that the automobile clubs and the manufacturers of cars have not already organized in opposition to this abuse of taxing power. In other quarters, as reflected by press editorials, numerous signs appear of growing discontent over the manner in which a burden that was gracefully assumed by the car owner in the beginning has been added to until it has become onerous.

There can be no justification other than a temporary emergency for a consumption tax on a legitimate and necessary article of commerce that runs to as high as 33 per cent of the retail price of the commodity. In the highest taxing states the consumer is today paying 24 cents for a gallon of gasoline which without tax would retail at 18 cents, and of this 24 cents but 14 cents goes to the marketer, refiner, transporter and producer. Imagine the feelings of the customer who puts 10 gallons of gasoline into his tank and then pays $1.40 to cover all production costs of the article, plus 40 cents for the marketing expenses and profit of the dealer, and on top of that 60 cents in taxes.

One hesitates to contemplate the social upheaval which would follow the imposition of like taxes upon other necessities of life. Were the 10-cent loaf of bread to be increased by a consumption tax to 13 cents, or a pair of shoes from $6 to $8, or a pound of sugar from 5 cents to 6½ cents, an outraged constituency would promptly chase the offending lawmakers back into the obscurity of private life. The attempt to increase the subway fare in New York City from 5 cents to 7 cents at once became a dominant political issue and its defeat in the Supreme Court was hailed as practically insuring the re-election of New York City's present mayor.

One reason for believing that the public will soon demand relief is that, unlike realty and income taxes, the gasoline levy is paid not only by the head of the family but by mothers, wives and children out of small and more closely watched allowances. Their discontent is heightened by the knowledge that already in several states a considerable part of the gasoline tax money ostensibly collected for highways is being diverted to other convenient channels.

The famous instance of the attempt to establish railroad rates on the basis of what the traffic would bear proved costly to its sponsors and led to Federal regulation. The present tendency to add to gasoline taxes until the public's patience is exhausted will certainly bring its reaction in time, but not until a large amount of harm has been worked. It would be much better for the states to adjust their taxes on an equitable basis now in conformity with the recognized principles of a fair division of government expense.

Recent Patents

CRACK AT HIGH PRESSURE

1,690,416. Cracking of Liquid Hydrocarbons. Owen Davis Lucas and Ernest Lawson Lomax, Westminster, London, England, assignors to V. L. Oil Processes, Ltd., Westminster, England, a British company. Filed July 23, 1925, Serial No. 45,525, and in Great Britain December 9, 1924. Three claims. (Cl. 196—48.)

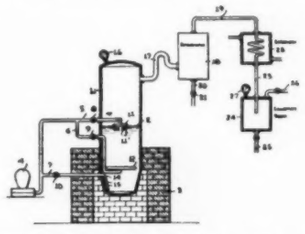
1. A process for the production of light from heavy oils which consists in heating the oils rapidly to the cracking temperature in a tube still, passing the heated oils into a conversion chamber in which they are maintained in bulk at the cracking temperature and at a pressure of from 600 to 1,000 pounds per square inch, drawing off the lighter oils in vapor form into a vapor pressure or refluxing chamber open directly to and forming an extension of the conversion chamber and consequently at the same pressure of 600 to 1,000 pounds per square inch, maintaining the said refluxing chamber at a temperature substantially below that of the conversion chamber, but sufficiently high to prevent, under the said pressure common to the conversion and refluxing chambers, the condensation of any oils below a predetermined density, condensing the heavier oils in the aforesaid refluxing chamber and then passing the condensed oils without reheating and below the cracking temperature through a branch passage directly back into the conversion chamber for further treatment, simultaneously drawing off liquid oils from the conversion chamber, releasing the said liquid oils through a pressure reducing valve into a lower pressure chamber, and removing the vapor of the lighter oils from the said lower pressure chamber.

AGITATE OIL WITH JETS

1,676,230. Process of Treating Oils. Henry C. Kirk, Baltimore, Md. Filed December 8, 1927. Serial No. 238,649. 15 Claims. (Cl. 196—68.)

2. A process of heat treating hydrocarbon oils to produce lighter distillates therefrom which comprises injecting oppositely directed non-planar oil streams within a body of oil under conversion conditions of temperature and pressure, to produce circulation within the body of oil of character and velocity sufficient to prevent formation of hard carbon.

4. A process of heat treating hydrocarbon oils to produce lighter distillates therefrom which comprises maintaining a body of oil under conversion conditions of temperature and pressure, injecting upwardly directed streams of oil within the body of oil in a lower zone thereof, to produce an upwardly moving current of oil and injecting a downwardly directed oil stream into the body of oil in an upper zone thereof to produce a downwardly moving oil current in said body of oil said downwardly directed oil stream,



supplementing said upwardly moving oil current, whereby circulatory currents are set up throughout the body of oil, and the deposition of hard carbon is substantially eliminated.

PROCESS TO RECOVER BITUMINOUS PRODUCTS

1,707,759. Process of and Apparatus for Treatment of Bituminous Materials. William Huntley Hampton, Portland, Ore. Filed December 17, 1919. Serial No. 345,485. Six claims. (Cl. 196—80.)

1. The process of obtaining valuable hydrocarbon products which comprises mixing with bituminous shale-like solid-matter, a mineral oil having a gravity within the kerosene range, digesting the mixture at a temperature high enough to liquefy contained bitumens and under sufficient pressure to substantially retard vaporization of the kerosene and heavier fractions, conducting away and recovering volatilized products, and separating solid matter from the residual digested mixture.

6. Apparatus for treating bituminiferous materials comprising, in combination, a plurality of digesters, means for advancing material through said digesters successively in series, the last digester in the series being adapted for operation under superatmospheric pressure, a cracking retort connected to said digesters and arranged to receive vapors therefrom, and liquid-separating means connected to the pressure digester and arranged to treat the mixture of solid and liquid material coming therefrom.

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for March

Runs

Company—	Month bbls.	Div.av. bbls.
Prairie P. L. Co.	4,619,000	149,000
Gulf P. L. Co.	1,714,368	55,302
Texas P. L. Co.	922,337	29,753
Magnolia P. L. Co.	2,196,587	70,858
Empire P. L. Co.	1,106,721	35,701
Cosden P. L. Co.	757,044	24,421
Sinclair P. L. Co.	3,162,000	102,000
Oklahoma P. L. Co.	3,043,998	98,192
Other lines*	6,262,000	202,000
Total March	23,784,055	767,228
Total February	22,978,583	820,663
Difference	805,472	53,453

Shipments

Prairie P. L. Co.†	5,880,544	189,695
Gulf P. L. Co.	1,681,189	54,232
Texas P. L. Co.	1,116,490	36,016
Magnolia Pet. Co.	2,218,572	71,567
Empire P. L. Co.	1,449,926	46,772
Cosden P. L. Co.	896,505	28,920
Sinclair P. L. Co.*	3,217,416	103,788
Oklahoma P. L. Co.	3,132,387	101,045
Other lines*	6,262,000	202,000
Total March	25,855,029	834,035
Total February	23,350,972	833,964
Difference	2,504,057	71

Stocks

	Bbls.
Prairie O. & G. Co.*	37,682,000
Gulf P. L. and Gypsy Oil Cos.	9,622,285
The Texas Company	8,349,987
Magnolia Pet. Co.	9,887,778
Empire P. L. Co.	4,148,034
Mid-Continent Pet. Corp.	3,439,639
Sinclair Crude Oil Purch. Co.*	20,572,000
Carter Oil Co.	12,450,683
Oklahoma P. L. Co.	3,263,858
Other lines*	11,775,000
Total March	121,191,264
Total February	119,111,780
Difference (see note)	2,079,484

*Estimated. †Prairie P. L. and Sinclair P. L. shipments include Texas crude oil.

Note—Prairie Oil & Gas Co. by purchase from T. B. Slick added 2,600,000 bbls. to its stocks.

Note—Stocks do not include approximately 5,300,000 bbls. of crude oil held in storage on private tank farms and leases.

EASTERN PIPE LINE REPORT

Runs from Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for February and March:

	Feb.,'29	Mar.,'29
Nat. Transit	133,165.20	181,078.06
S. W. Pa. P. L.	88,660.70	102,780.57
Eureka P. L.	308,930.88	361,950.53
Buckeye P. L. (Macksburg)	298,730.82	328,651.40
Buckeye P. L. (Cleveland)	10,466.65	11,850.63
Buckeye P. L. (Lima, etc.)	81,725.70	106,736.48
Indiana P. L.	3,645.21	5,695.98
Cumberland P. L.	173,139.79	188,917.24
N. Y. Transit	25,714.25	30,819.36
Tidewater P. L.	188,664.86	216,180.03
Pure Oil	55,790.43	60,961.13
Emery P. L.	59,159.57	64,575.89
Paragon Dev.	16,717.79	14,880.20
Stoll Oil Ref.	6,833.00	6,722.77
Total	1,451,334.95	1,681,800.27
Daily ave.	51,833.39	54,251.62

Note—Indian Refining Co. had other receipts of 305,404.33 bbls. Paragon Refining Co. had other receipts of 174,281.48 bbls. Paragon Development had other receipts of 197.81 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky for February and March:

	Feb.,'29	Mar.,'29
Nat. Transit	385,191.81	472,740.05
S. W. Pa. P. L.	334,454.56	324,198.08
Eureka P. L.	203,870.95	227,945.27
Buckeye P. L. (Macksburg)	161,417.11	178,851.61
Buckeye P. L. (Cleveland)	1,932.85	2,675.09
Buckeye P. L. (Lima, etc.)	1,100,029.84	1,398,450.19
Indiana P. L.	1,288,564.76	1,426,742.83
Cumberland P. L.	128,595.90	202,271.56
Southern P. L.	78,401.44	.....
N. Y. Transit	133,227.78	207,577.62
Northern P. L.	154,522.76	185,794.76
Tidewater P. L.	191,990.86	154,430.49
Pure Oil	58,985.39	68,193.52
Emery P. L.	69,672.20	62,136.95
Paragon Ref.	153,894.94	176,375.05
Paragon Dev.	17,084.90	17,320.04
Total	4,462,838.05	5,005,703.11
Daily ave.	159,387.06	161,474.29

Indian Refining Co. reported other deliveries of 314,483.59 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky and Indiana at the close of February and March:

	Feb.,'29	Mar.,'29
Nat. Transit	779,918.51	731,188.54
S. W. Pa. P. L.	473,848.71	430,880.16
Eureka P. L.	1,154,081.70	1,227,449.21
Buckeye P. L. (Macksburg)	533,780.16	496,081.38
Buckeye P. L. (Cleveland)	39,875.08	53,245.56
Buckeye P. L. (Lima, etc.)	2,114,370.56	2,015,652.51
Indiana P. L.	521,024.63	517,499.27
Cumberland P. L.	573,102.52	568,233.96
Southern P. L.	446,321.17	538,367.15
N. Y. Transit	286,204.16	283,675.14
Northern P. L.	401,642.64	377,796.87
Tidewater P. L.	1,303,959.46	1,369,220.70
Pure Oil	14,136.77	8,038.47
Emery P. L.	8,672.52	12,036.26
Indian Ref.	60,203.15	52,393.15
Paragon Dev.	6,568.59	4,622.34
Paragon Ref.	21,124.63	18,740.25
Tuscarora	.....	296,936.59
Total	8,738,834.96	9,002,057.51
Increase	1,141,271.33	263,222.55

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of February and March, showing the gross stocks of the above fields:

	Feb.,'29	Mar.,'29
Pennsylvania	3,246,721.38	3,315,864.74
Lima	659,187.62	578,882.26
Kentucky	747,383.60	742,122.61
Mid-Continent	3,810,386.65	4,038,082.57
Illinois	275,155.71	327,105.33
Total	8,738,834.96	9,002,057.51

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1926	1927	1928	1929
January	55,630	56,209	52,904	51,749
February	60,394	61,298	57,002	51,833
March	61,644	63,247	57,485	54,252
April	63,019	60,927	56,812	.....
May	60,580	60,284	62,067	.....
June	61,121	62,757	58,230	.....
July	63,206	58,674	57,144	.....
August	61,815	60,870	57,745	.....
September	64,639	60,285	53,487	.....
October	161,132	147,080	58,100	.....
November	67,774	57,275	52,565	.....
December	58,755	53,089	52,025	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1926	1927	1928	1929
January	156,056	141,227	146,465	165,721
February	159,488	138,534	167,368	159,387
March	150,239	133,777	158,883	161,474
April	152,374	140,227	172,935	.....
May	160,998	144,594	180,559	.....
June	160,257	149,772	188,024	.....
July	160,045	151,850	189,470	.....
August	151,929	188,653	192,853	.....
September	158,915	144,213	194,138	.....
October	161,132	147,036	176,000	.....
November	172,608	150,975	176,898	.....
December	136,428	144,504	173,572	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1927	1928	1929
January	9,718,008	12,276,710	7,596,564
February	10,119,162	12,180,419	8,738,835
March	10,794,644	12,239,725	9,002,058
April	11,112,295	11,740,125	.....
May	11,359,381	11,602,468	.....
June	11,493,673	11,287,678	.....
July	11,458,128	10,819,331	.....
August	11,989,115	10,236,743	.....
September	12,212,716	9,660,910	.....
October	12,047,661	9,229,709	.....
November	11,939,740	8,366,552	.....
December	12,340,297	7,539,555	.....

Franklin Pipe Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1928—	Runs	Shipments	Stocks
June	3,153.08	2,779.02	17,922.58
July	2,902.50	3,628.02	17,197.06
August	2,874.11	2,350.13	17,721.04
September	2,820.31	5,255.42	15,285.93
October	1,289.93	538.89	17,551.93
November	2,663.53	788.47	19,426.99
December	3,053.60	3,167.53	19,426.99
1929—			
January	2,099.90	.....	19,313.06
February	2,469.47	6,873.20	17,009.23
March	3,330.82	3,595.01	16,745.04

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, April 1	2,337,759.10
Runs from wells	700,107.14
Other receipts	310,352.09
Regular deliveries	547,544.78
Other deliveries	452,147.86

The amount of Illinois oil run by the Tidewater Pipe Co. in March was 28,212.53 bbls. Deliveries were 36,504.82 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1928—	Runs	Deliveries
April	526,013.13	448,282.44
May	632,968.64	522,980.51
June	608,552.49	625,087.33
July	612,286.49	565,678.37
August	659,074.85	671,864.02
September	570,307.91	737,293.50
October	626,147.64	626,290.40
November	576,332.88	702,589.93
December	584,633.00	491,517.26
1929—		
January	570,727.38	545,084.66
February	617,330.17	603,387.70
March	728,319.67	586,049.60

Tidewater Pipe Co., Ltd., also delivered in March 119,507.94 bbls. Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls. per day—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
October	17,323	....	11,807	6,483	....	.....	.....	.....	.....	.....	.....	35,613
November	21,333	5,200	25,400	18,200	7,100	77,233	.....	..	.....	.....	1,000	78,233
December	4,968	2,968	24,673	18,806	3,064	54,484	.. ..	.....	.....	.....	2,419	56,903
January	15,838	.....	16,676	11,838	7,938	52,290	.. ..	.....	.....	.....	5,161	57,451
February	14,214	..	38,750	17,250	11,607	81,821	.....	..	.....	.....	3,750	85,571
March	19,903	968	31,258	18,581	7,355	78,065	.....	.....	.....	.....	.....	78,065

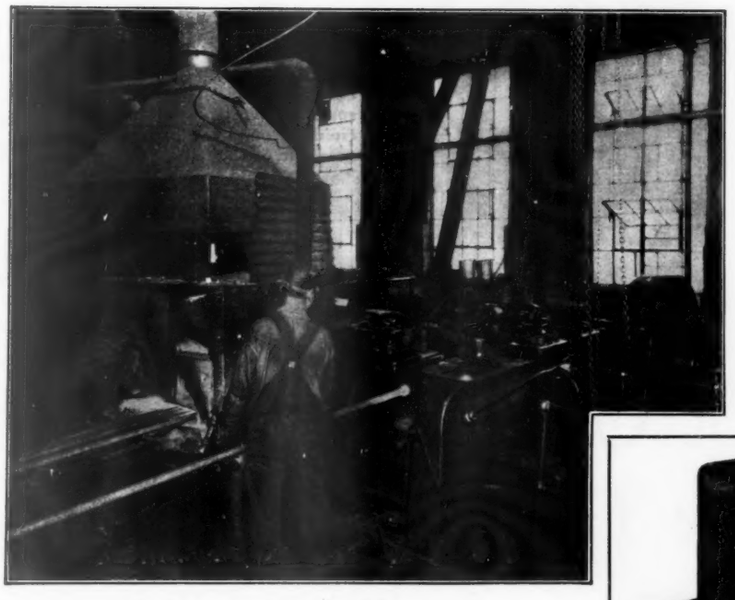
AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
October	20,161	16,839	128,452	27,710	7,098	200,258	.....	32,226	3,065	1,612	36,903	237,161
November	18,400	16,033	133,700	30,267	8,433	206,833	1,333	37,167	4,633	.....	43,133	249,966
December	15,419	15,968	140,871	42,323	8,709	223,290	2,903	35,129	2,355	.....	40,387	263,677
January	11,936	8,903	130,065	34,871	15,709	201,484	.. ..	34,808	4,098	1,287	40,193	241,677
February	13,750	15,071	135,179	32,750	17,893	214,643	.....	34,357	821	143	35,321	249,964
March	18,548	26,064	145,516	39,162	28,162	257,452	.....	42,581	2,322	.....	44,903	302,355

GROSS PRODUCTION IN UNITED STATES FOR 12 MONTHS

(In barrels of 42 gallons)

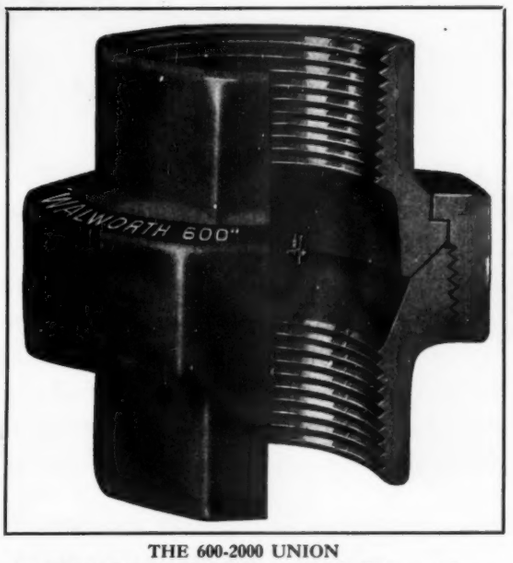
1928—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
April:	Month	18,280,729	19,096,920	21,876,913	3,412,260	2,472,600	1,912,187	2,370,810	3,231,000	72,653,419
	Daily average	609,357	636,564	729,230	113,742	82,420	63,740	79,027	107,700	2,421,786
May:	Month	19,331,866	19,443,355	21,220,046	3,367,809	2,843,847	1,926,026	2,525,043	3,619,000	74,276,992
	Daily average	623,609	627,205	684,518	108,639	91,737	62,130	81,447	116,742	2,396,032
June:	Month	19,164,244	18,482,981	19,877,936	3,202,050	3,075,911	2,074,422	2,425,470	3,401,000	71,704,014
	Daily average	638,808	616,099	662,598	106,735	102,530	69,147	80,849	113,367	2,390,134
July:	Month	19,754,458	18,809,188	22,055,737	3,171,548	2,792,139	2,238,090	2,492,586	3,487,000	74,800,746
	Daily average	637,241	606,748	711,475	102,308	90,069	72,131	80,406	112,484	2,412,927
August:	Month	19,444,899	20,840,804	22,339,131	3,147,058	2,711,787	1,989,264	2,561,840	3,556,000	76,590,783
	Daily average	627,255	672,284	720,448	101,518	87,477	64,170	82,640	114,709	2,470,670
September:	Month	18,908,169	22,456,860	21,554,269	3,047,250	2,540,070	1,830,225	2,432,430	3,229,000	75,998,273
	Daily average	630,272	748,562	718,207	101,575	84,669	61,007	81,047	104,300	2,533,279
October:	Month	19,430,992	23,431,071	22,176,853	3,058,460	2,652,484	1,836,221	2,571,822	3,612,000	78,769,903
	Daily average	626,806	755,841	715,376	98,660	85,564	59,233	82,962	116,516	2,540,964
November:	Month	19,907,526	22,078,680	20,791,798	2,977,800	2,476,080	1,801,914	2,388,870	3,348,000	75,770,668
	Daily average	663,584	735,956	693,059	99,260	82,536	60,064	79,629	111,600	2,505,689
December:	Month	21,574,703	22,425,722	22,180,102	2,988,400	2,521,571	1,846,841	2,289,040	3,581,000	79,407,379
	Daily average	695,958	723,410	715,487	96,400	81,341	59,576	73,840	115,516	2,561,528
1929—										
January:	Month	23,385,939	22,417,030	23,412,192	3,861,641	2,453,526	1,807,887	2,076,070	3,379,000	81,793,285
	Daily average	754,385	723,130	755,232	92,311	79,146	58,318	66,970	109,000	2,638,492
February:	Month	22,300,707	20,448,764	20,816,309	2,557,968	2,154,194	1,569,930	1,966,656	3,122,000	74,935,428
March:	Month	24,324,729	20,838,262	24,358,592	2,951,076	2,241,734	1,756,153	2,195,823	3,503,000	82,169,369
	Daily average	784,669	672,202	784,669	95,196	72,314	56,650	70,833	113,000	2,650,623
Total 12 months		245,303,961	250,769,637	262,659,778	36,742,320	30,935,945	22,589,160	28,295,460	41,068,000	918,370,261



FORGING THE 600-2000 UNION

The 600-2000 is suitable for service as follows in sizes 2" and smaller:

Service	Working Pressure	Temp.
Steam	600 lbs.	750 Deg. F.
Hot Oil or Vapor	600 lbs.	750 Deg. F.
Hot Oil or Vapor	500 lbs.	900 Deg. F.
Cold Oil, Water or Gas (Non-Shock)	2000 lbs.	100 Deg. F.



THE 600-2000 UNION
for 600 lbs. Steam and 2000 lbs. Cold Oil, Water or Gas

THE WALWORTH 600-2000 Union is All forged

All three parts of this new union —and there are *only* three—are forged from bars of high grade steel by Walworth craftsmen.

A most careful selection of the steel used, high standards of workmanship and rigid testing and inspection all through the process of manufacturing the Walworth 600-2000 are guarantees of highest quality in the finished product.

This all-steel, all-forged union is right at home on any oil production or refinery lines where high pressures or high temperatures, or both, have to be met. It has been especially designed for heavy duty and made for hard use.

Careful finishing of the rounded surfaces of the steel thread end and steel bottom assures tight seating, and this is further assured by the extra long thread connection between thread end and ring.

WALWORTH

Walworth Company, General Sales Offices: 51 East 42nd St., New York
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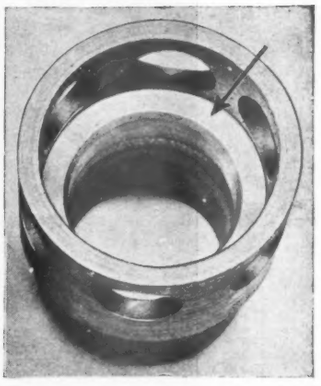
The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at the post office at Tulsa, Okla., under the Act of March 3, 1879.

Three stages in the preparation of a valve for Gould hot oil pump.

Left -Undercut. *Center*—Stellite applied. *Right*—Finish ground ready to use.



Stellited Hot Oil Valves Last *Six Times* as Long

AT the Crew Levick Company's Pettys Island refinery oil passes through Gould's Hot Oil Pumps at 850 deg. F. These pumps are equipped with three inch ball valves, which open and close an estimated 1,200,000 times per month. Stellited valves for these pumps average a full year's continuous run. Special steel valves formerly used ran two months at the best.

The longevity of Haynes Stellite under this severe service, its stubborn resistance to wear, is easily explained by the inherent properties of the metal. Haynes Stellite is red hard. It is unaffected by temperature up to 1800 deg. F. It is tougher at red heat than when cold. At any temperature it resists wear better than any other metal.

Throughout industry, operators are taking advantage of Haynes Stellite to add three to five and more times longer life to wearing parts. The Haynes Stellite representative will gladly show you where and how to use it. Ask him to call.

HAYNES STELLITE COMPANY.
Unit of Union Carbide UCC and Carbon Corporation

DISTRICT SALES OFFICES

Chicago—1949 Peoples Gas Bldg.
Detroit—4-240 Gen'l Motors Bldg.
Los Angeles—1310 Santee Street
San Francisco—114 Sansome St.
Cleveland—628 Keith Bldg.
Houston 6119 Harrisburg Bldg.
New York—30 East 42nd Street
Tulsa—Exchange National Bank Bldg.

General Offices—Kokomo, Indiana

Ask your nearest Haynes Stellite District Sales Office for the latest booklets on Stelliting.

Stelliting with

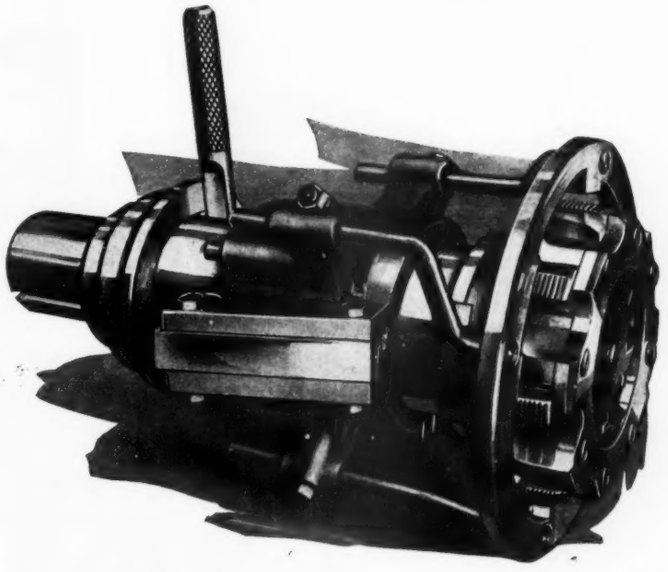
Haynes Stellite welding rod is also available from any of the 28 District Sales Offices of Oxweld Acetylene Company.

HAYNES STELLITE

VICTOR

STYLE M

RECEDING CHASER COLLAPSIBLE TAP



RECEDING CHASER FEATURE—Cuts perfect taper threads any desired length with minimum driving power.

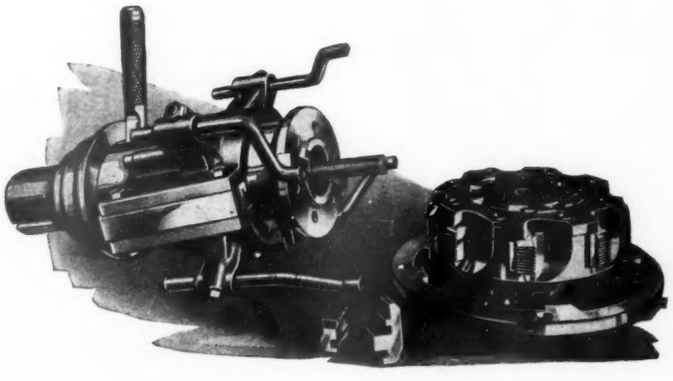
DETACHABLE HEADS — Several sizes of heads can be applied to same body, greatly reducing installation cost so that you are warranted in using taps on limited production.

COMBINATION TAPERS—Taps are regularly furnished for cutting ¾″ and ⅜″ taper per foot. The change is made by simply shifting the position of one bolt and replacing chasers. Any combination of two tapers can be provided for.

GROUND THREAD CHASERS—All chasers have the threads ground after hardening, thereby insuring longest possible life and absolute accuracy of thread form and lead. Chasers are unusually wide to permit many sharpenings.

All parts are either heat treated or hardened and ground to insure maximum wear and accuracy.

Taps can be held stationary or revolved, depending upon type of machine on which applied.



These taps are ideal for tapping all types of oil field supplies, such as couplings, tool joints, casing shoes, packer collars, etc. They are also adapted for tapping valve bodies, fittings, flanges, and all classes of tapered threads in any material.

Send us blue prints of your work and let us tell you what we can do for you.

LANDIS MACHINE COMPANY, Inc.

VICTOR PLANT

WAYNESBORO, PA., U. S. A.

ALCO

Hard Formation Bits

Rotary Core Drills

Alco Drilling Tools Are Daily Making Drilling Records In Oil Fields All Over the World.

Alco Drilling Tools Make More Full Gage Straight Hole In Any Formation

ALCO OIL TOOL CO.

Factories:

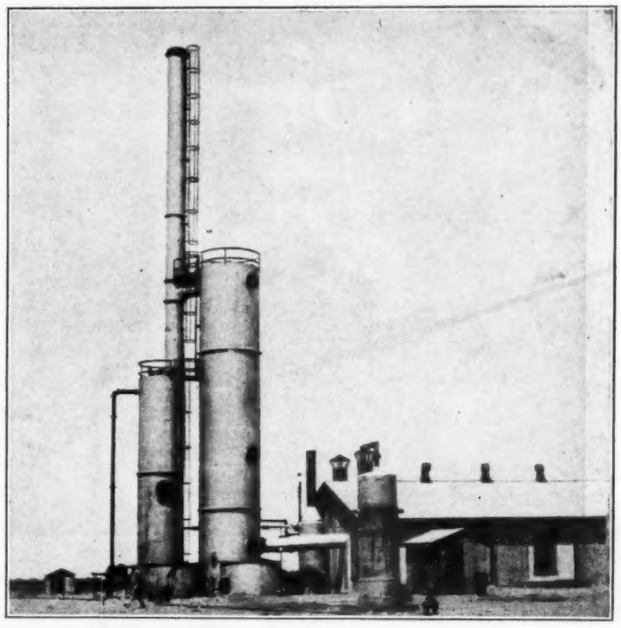
Compton, California
Houston, Texas

Ventura—Kettleman Hills
J. C. HILLMAN
P. O. Box 4136 Houston, Texas
Mid-Continent Salesmanager

DRILLING CORING

Hydrogen Sulphide Removal

...With the KOPPERS Patented Process



Gulf Production Company's Plant

THE Liquid Purification Plant of the Gulf Production Company at Odessa in Crane County, Texas, has been in successful operation for a year and one half. Its daily task is to remove 93% of the Hydrogen Sulphide from 350,000 cubic feet of natural gas containing 7,000 grains of this corrosive substance per 100 cubic feet.

The Western Gas Construction Company

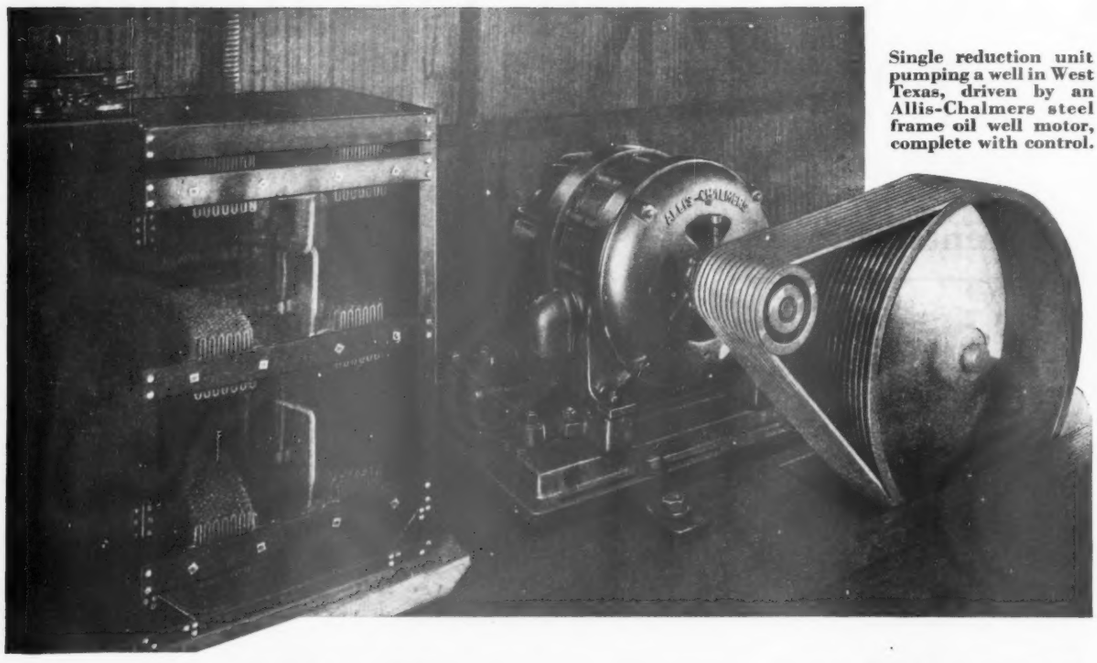
Ft. Wayne, Ind.

Subsidiary of The Koppers Company

THE removal of Hydrogen Sulphide from gas pays dividends in greatly reduced corrosion of pipe lines and equipment even where it is not a necessity for safeguarding health.

The Koppers Patented Liquid Purification Process is successfully purifying over five hundred million cubic feet of gas per day under the widest possible variety of sulphur content and pressure conditions. Of this quantity over 55,000,000 cubic feet is natural gas and high sulphur oil gas.

Write to us about your problems



Single reduction unit pumping a well in West Texas, driven by an Allis-Chalmers steel frame oil well motor, complete with control.

A Compact Unit

that absorbs all Shocks ...

THIS Texrope driven single reduction unit protects the motor from shocks during pumping or drilling operations. The Texrope Drive, consisting of a number of special V-shaped rubber and fabric belts operating on V-grooved pulleys, absorbs the shocks before they can get to the motor. Texrope Drives are efficient and trouble-proof, requiring very little attention.

The Allis-Chalmers single reduction unit for pumping or drilling consists of a metal base with a detachable Timken equipped countershaft and a Texrope Drive. Universal slide rails permit the use of any size or type of motor.

The unit shown above is driven by an Allis-Chalmers oil well motor. Steel frame, heavy cording of rotor connections and lacing between coil ends, dipping stator and rotor after winding in special insulating varnish and baking which protects windings from moisture, sulphur fumes and field dust and also adds mechanical strength, insure uninterrupted service.

Write your nearest oil field office for detailed information on Allis-Chalmers oil field equipment. Stocks carried at Tulsa, Houston, Sweetwater, and Los Angeles.

ALLIS-CHALMERS MANUFACTURING CO., MILWAUKEE, WIS.

ALLIS-CHALMERS MOTORS

and **TEXROPE DRIVES**

Products for the Oil Industry

Single and Double Reduction Units
Texrope Drives
Motors and Control
Drilling-Pumping-Pipeline
Transformers
Centrifugal Pumps
Pipe Line Pumps

OIL FIELD OFFICES

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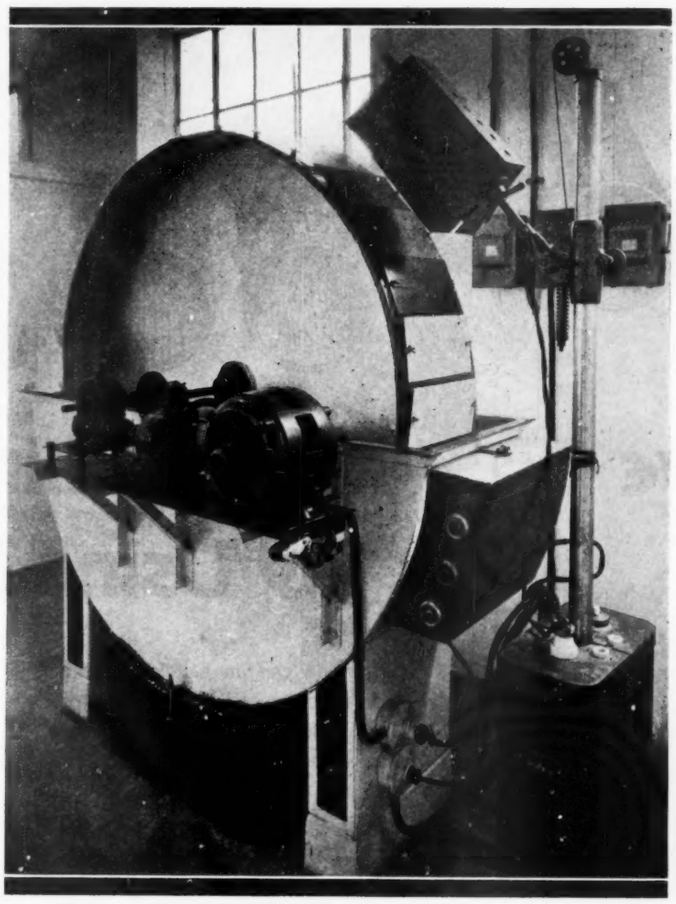
WESTERN SUPPLY CO., Tulsa

4 years pass in 40 days
...on this relentless "wheel of time"

BURNING sunlight ... beating rains ... quick temperature changes. A day of constantly changing weather conditions that passes in thirty minutes. This is the accelerated weathering test to which Hill, Hubbell & Company's paint and varnish products are subjected on the machine illustrated at the right.



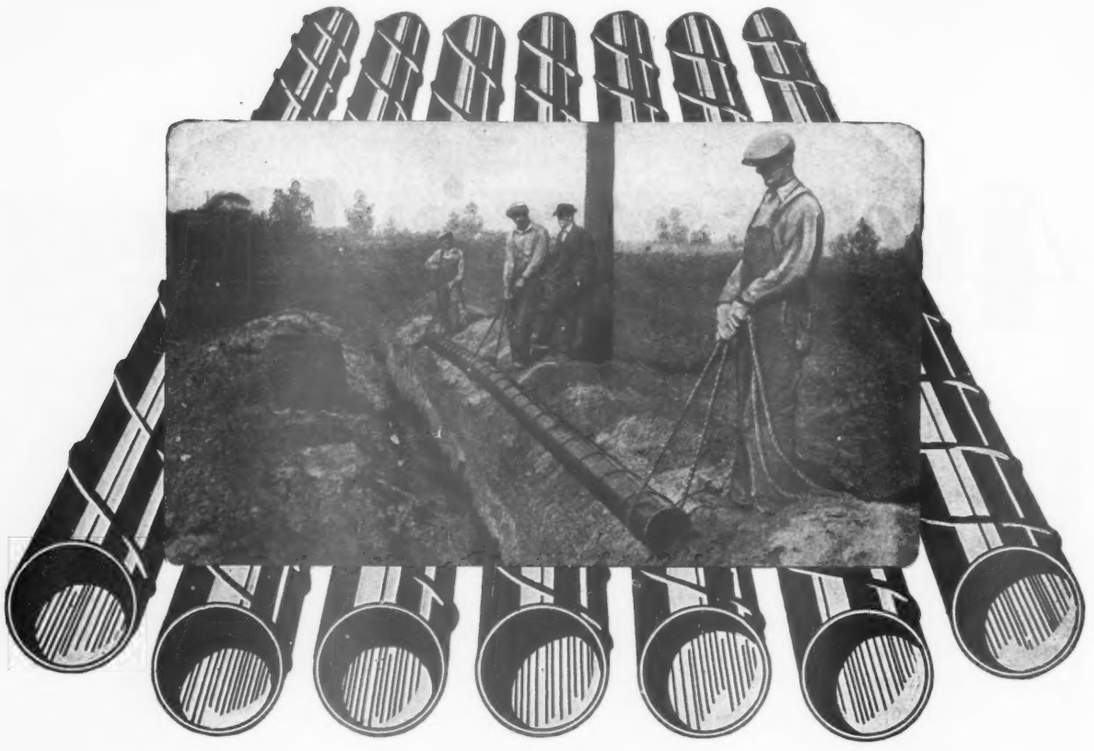
The quality that distinguishes Lighthouse Brand products in longer service is laboratory controlled throughout their manufacture — a quality that is a definite part of the specifications of every gallon produced in Hill, Hubbell & Company's factories.

Lighthouse Brand color paints, varnishes, and enamels, as well as Biturine Pipe Coatings, L & S Portland Cement Paint, and Bitulumin have attained world wide distribution on their merits, which are worth investigating if you are concerned with the maintenance problems of production, refining, transportation, and marketing equipment. Address Box 1483, Tulsa, Oklahoma.

HILL, HUBBELL & COMPANY

Division
General Paint Corporation
Manufacturers of Highest Grade Oil Industry Paints and Pipe Line Coatings
General Offices: SAN FRANCISCO
Mid-Continent Factory: TULSA
Offices:

SAN FRANCISCO - TULSA - NEW YORK - CHICAGO - LOS ANGELES - HOUSTON - PORTLAND - SEATTLE - SPOKANE



Save On Your Handling Costs
. . . By Using Naylor Pipe

LIGHT weight pipe can be handled quickly, easily—and at lower costs. This holds true from the time it is first claimed at the railroad siding—every step of the way—up to and including erection.

And light weight is one important advantage of Naylor Pipe.

Naylor Pipe, size for size, pressure for pressure, weighs only half as much per running foot as standard weight wrought pipe. This assures greater speed in handling. Less labor means lower costs.

Why not let this light weight feature of Naylor Pipe reduce pipe costs in your pipe line service? Many prominent companies are already doing so. Send for a sample length of Naylor Pipe.

Unlike ordinary pipe, Naylor Pipe is made of Toncan Iron (an alloy of Iron, Copper and Molybdenum). Thus, it has a far greater resistance to rust and corrosion—and consequently, longer life.

Naylor Pipe Company
Main Office and Plant, 1230 East 92nd Street, Chicago

Sales Offices:

New York	Philadelphia	Tulsa
25 Church Street	Witherspoon Bldg.	507 Philtower Bldg.

Detroit, 1500 Cadillac Square Bldg.

Ducommun Corporation
Los Angeles San Francisco
Exclusive Distributors: California, Arizona, Nevada and Utah
Montreal, Canada—Mechanical Equipment Company, New Birks Building

TONCAN
Naylor Pipe
Mo-lyb-den-um
IRON

Standardized Naylor Pipe is made in sizes 6" to 12" in standard 20 ft. lengths or special lengths up to 40 ft. Made with five types of pipe ends to wrought pipe standards for five types of joints.

Where corrosion resistance is not a factor, Naylor Pipe can be furnished in steel.

Toncan Copper Molybdenum Iron is a development of Central Alloy Steel Corporation, the world's largest and most highly specialized alloy steel producers. It possesses a superior corrosion-resistance, making it the favored pipe material.

American Hammered Piston Rings

Individually cast, mechanically hammered to give lasting tension, particularly designed and adapted for Oil Field and other severe service.

Endorsed and used as Factory Equipment by---

Ajax Iron Works	Corry, Pa.
Bruce-Macbeth Eng. Co.	Cleveland, Ohio
Bovaird & Seyfang Mfg. Co.	Bradford, Pa.
Bradford Supply Co.	Bradford, Pa.
C. & G. Cooper Co.	Mount Vernon, Ohio
Chicago Pneumatic Tool Co.	New York, N. Y.
De La Vergne Machine Co.	Philadelphia, Pa.
Franklin Valveless Eng. Co.	Franklin, Pa.
Ingersoll-Rand Co.	New York, N. Y.
McIntosh & Seymour Corp.	Auburn, N. Y.
Muncie Oil Engine Co.	Muncie, Ind.
National Supply Co.	Toledo, Ohio
Pennsylvania Pump & Compressor Co.	Easton, Pa.
Power Mfg. Co.	Marion, Ohio
Jos. Reid Gas Eng. Co.	Oil City, Pa.
Sullivan Machinery Co.	Michigan City, Ind.
Titusville Iron Works	Titusville, Pa.
Wilson Snyder Mfg. Co.	Pittsburgh, Pa.
Worthington Pump & Mach. Corp.	New York, N. Y.

Look for the BALL POINT HAMMER MARKS *inside the ring*

May be obtained from the above companies, or their selling agents, in standard sizes or oversizes.

Rings for any engine or compressor not listed above can be obtained direct from us.

The American Hammered Piston Ring Co. Baltimore, Md.

KILL FIRE WHILE IT IS YOUNG

FOAMITE Extinguishers snuff out these smaller fires

Even the small fire holds possibilities of disaster—unless you can snuff it out quickly. That's where the smaller FOAMITE Equipment—FOAMITE Extinguishers and FOAMITE Engines—fits into your fire protection plan. Located at strategic points, this smaller FOAMITE Equipment helps you to kill every small fire while it *is* small.

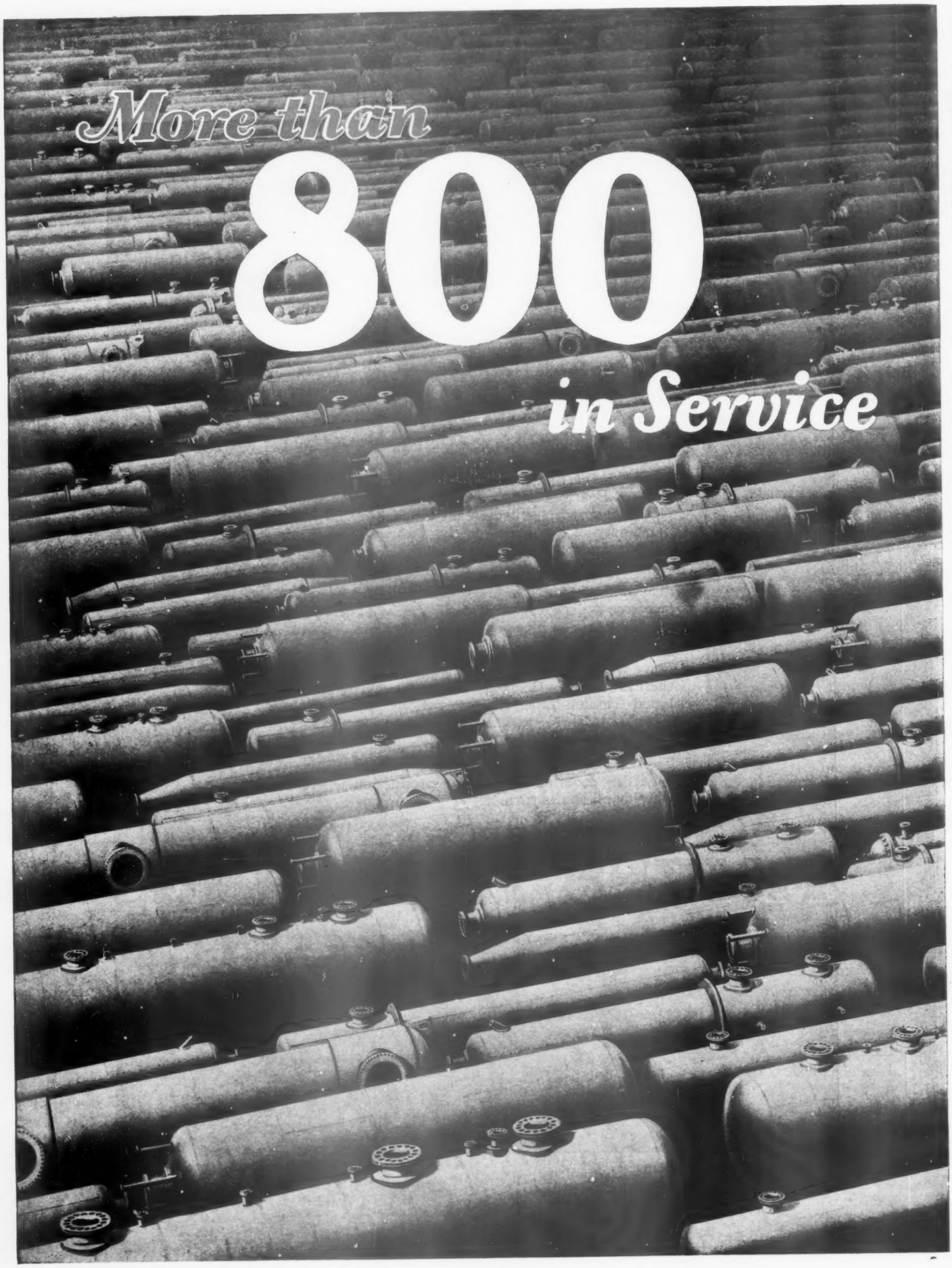
The 5-gallon extinguisher discharges 40 gallons of fire-smothering *Firefoam*. With its greater capacity it backs up your 2½-gallon extinguishers and gives added protection at points where the fire is apt to be larger.

Call an American-LaFrance and Foamite representative to study the conditions on your property and suggest where the 5-gallon extinguisher and other units of FOAMITE Protection are needed. There are representatives at points convenient to all principal oil producing and refining centers. American-LaFrance and Foamite Corporation, Engineers and Manufacturers, Department F-28, Elmira, New York.

AMERICAN-LAFRANCE AND FOAMITE PROTECTION

A Complete Engineering Service
For Extinguishing Fires

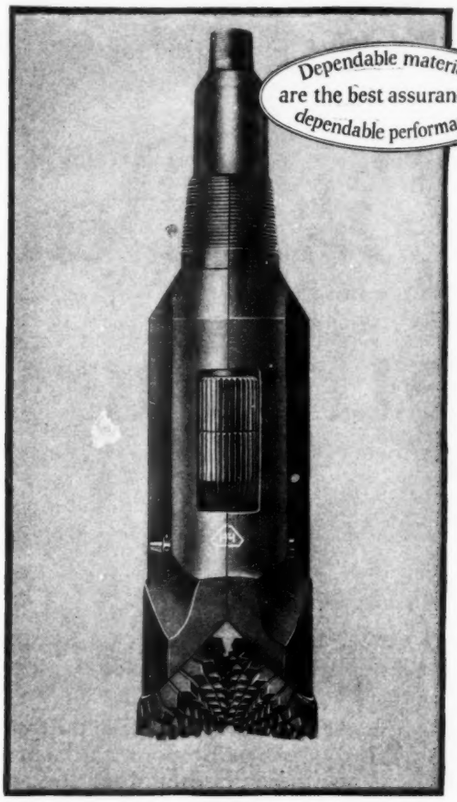
WHEREVER WHEELS
AND SHAFTS TURN
Industry's profile cuts the sky—express trains glide by—traffic whistles shriek, sirens snort, bells clang. In the thick of industry and transportation are Timken Bearings in railroad and street car journals, electric motors, buses, trucks, motor cars and machinery of all kinds—saving lubricant, reducing friction, and prolonging machine life.
Where roads are to be made, rivers bridged—where men mine the earth or use its soil for growing grain or pierce it deep to tap the oil supply—there again are Timken Bearings and Timken benefits.
Everything we eat or wear, buy, sell or use—every move we make in transporting people or products—there are Timken Bearings with their exclusively combined Timken tapered construction, Timken POSITIVELY ALIGNED ROLLS and Timken electric steel.
For wherever power is applied through moving parts, Timken Bearings are bettering the work of the world—cutting costs and increasing production wherever wheels and shafts turn.
THE TIMKEN ROLLER BEARING COMPANY
CANTON, OHIO
TIMKEN Tapered Roller BEARINGS


More than
800
in Service

SMITHWELDED CRACKING STILLS
A.O. SMITH CORPORATION
OIL AND GAS FIELD PRODUCTS DIVISION

Had Halliburton relied solely on patent protection to maintain its business, it would have reserved to itself the hundreds of thousands of dollars spent in research, development and improvement. But Halliburton has always realized that *permanent* business is founded on the bedrock of service. The result of this policy is a degree of cementing efficiency and organization undreamed of when the Perkins Patent went into effect.

HALLIBURTON OIL WELL CEMENTING CO.
Duncan, Oklahoma



Hughes Simplex rotary rock bit, mfd. by HUGHES TOOL CO., Houston, Texas. Main body, cutters, self-cleaning cones and side reamers are Nickel Chromium Steel.

The hardest formation won't stop a HUGHES Nickel Chromium Steel *rock bit*

THE Hughes Simplex rotary rock bit has established a reputation for cutting straight holes through all kinds of tough rock formations. Some of the deepest and most difficult drilling operations in the country have been successfully completed with Hughes rock bits.

Nickel Chromium Steel self-cleaning cones for Hughes Simplex rock bit, mfd. by Hughes Tool Co.

Knowing that dependable materials are the best assurance of dependable performance, the Hughes Tool Company has selected Nickel Chromium Steel for the main body, cutters, self-cleaning cones and side reamers of this well-known drilling equipment. The toughness, hardness and strength of Nickel Alloy Steel are physical properties that insure unfailing service under the most severe operating conditions.

Extensive tests have shown that the average, maximum and minimum values of Nickel Alloy Steels vary less from heat to heat than other commercial steels. In the manufacture of machinery, where it is impractical to test the individual properties of each piece of steel used, this feature is particularly important.

Probably the most impressive evidence of the uniformly dependable mechanical properties of Nickel Steel parts is the fact that practically all manufacturers of airplane engines, both in America and Europe, have adopted Nickel Alloy Steels for highly stressed parts, the weight of which must be pared to a minimum.

NICKEL
FOR ALLOY STEEL

Information on the properties and applications of Nickel Alloy Steels will be gladly furnished by our staff of engineers.

SEND FOR "BUYERS' GUIDE TO NICKEL ALLOY STEEL PRODUCTS"

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.

The Cake Beneath the Frosting

ANY OLD CAKE can be camouflaged by a tempting icing—but it's not the looks that makes the cake, *it's what's beneath the icing*.

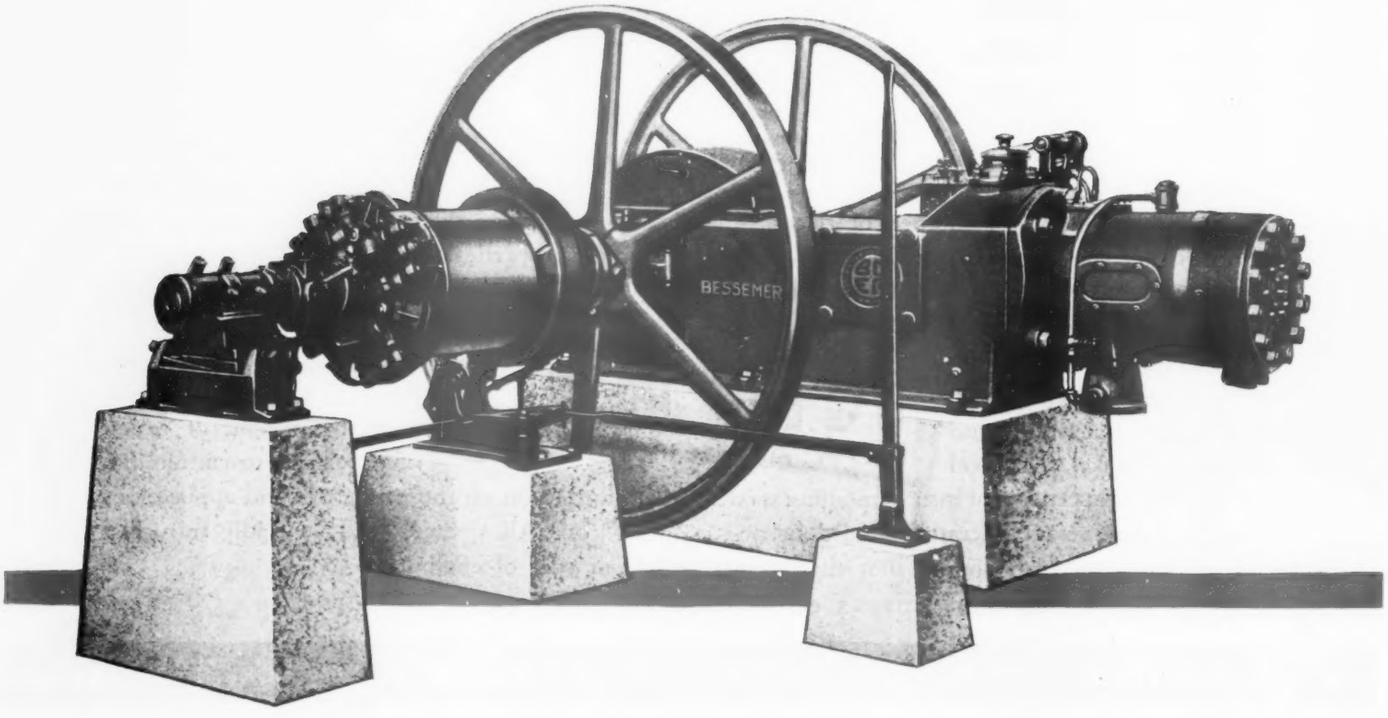
And the same holds true even with Oil Field Power Equipment. Fancy trimmin's and glossy paint alone can't turn out the running hours. It's what's beneath that does the work and pays the profits, or determines the losses.

Bessemers have the filling beneath the frosting—and there are 1,420,000 horsepower scattered around the world going about their daily jobs to prove it. You can't buy power output on looks—but you can buy Bessemers and be sure of getting performance along with appearance.

Thirty years have proved that "You buy the best when you buy the Bessemer".

THE COOPER-BESSEMER CORPORATION
Formerly The C. & G. Cooper Company and the Bessemer Engine Company
Mt. Vernon, Ohio. Grove City, Pa.

BESSEMER



How Do You Train Your Welders?

AN important feature of Linde Process Service is aid in the selection and training of welders for specific tasks. This helps secure uniformity in both the appearance of the completed product and the strength and tightness of the welds. Linde Process Service can also help you lay out a system for training apprentices, thus assuring a dependable supply of experienced operators.

LINDE OXYGEN
The Linde Air Products Co.

~

Prest-O-Lite
Dissolved Acetylene
The Prest-O-Lite Co., Inc.

~

Oxweld
Apparatus and Supplies
Oxweld Acetylene Co.

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UNION CARBIDE
Union Carbide Sales Co.

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Units of

UNION CARBIDE AND CARBON CORPORATION

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64 Linde Plants—45 Prest-O-Lite Plants—154 Oxygen Warehouse Stocks—138 Acetylene Warehouse Stocks—38 Apparatus Warehouse Stocks —235 Carbide Warehouse Stocks

One of the 52 (200-ampere) G-E arc welders being used by the Clark Welding Engineering Co. of Waco, Texas to weld the 205 mile (16-in.) pipe line from Jal, New Mexico to El Paso, Texas. (General contracting by Smith Brothers, Inc., Dallas, Texas.)

ARC WELD *your* PIPE LINES

Mile after mile of new oil pipe line is proving the economy and superiority of arc-welded field joints. Twenty-five per cent faster and twenty-five per cent lower in cost than gas welding, the trend of construction is definitely toward arc welding.

Figures reported by a contractor for a recent 20-inch pipe-line installation showed that arc-welded joints averaged two dollars less in cost than gas-welded joints.

Thus the saving on 80 miles of 20-inch pipe, electric field-welded at the rate of ½ mile per day, would pay for the cost of the 14 arc welders required for the job.

In the extensive pipe-line program now under way in the Southwest, General Electric engineers and more than 100 G-E arc-welding equipments are playing a leading part. The contractors now building the 205-mile El Paso Utilities line and the Texas Pipe Line Company's 600-mile line (from Monahans to Port Arthur, Texas) are both employing G-E arc-welding equipment.

We cordially invite all general contractors and welding contractors to consult our welded-pipe-line files—which are most complete. Simply get in touch with your nearest G-E office.

THE MORE YOU SAVE THE BETTER YOUR PRODUCT

530-60

JOIN US IN THE GENERAL ELECTRIC HOUR, BROADCAST EVERY SATURDAY AT 8 P.M., E.S.T. ON A NATION-WIDE N.B.C. CHAIN

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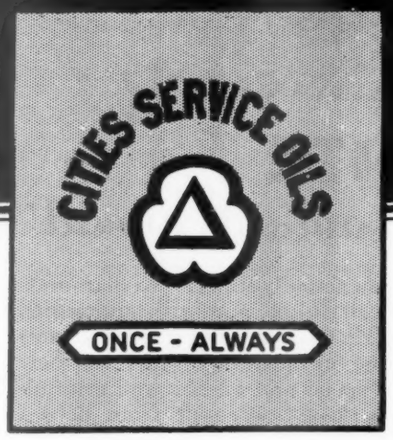

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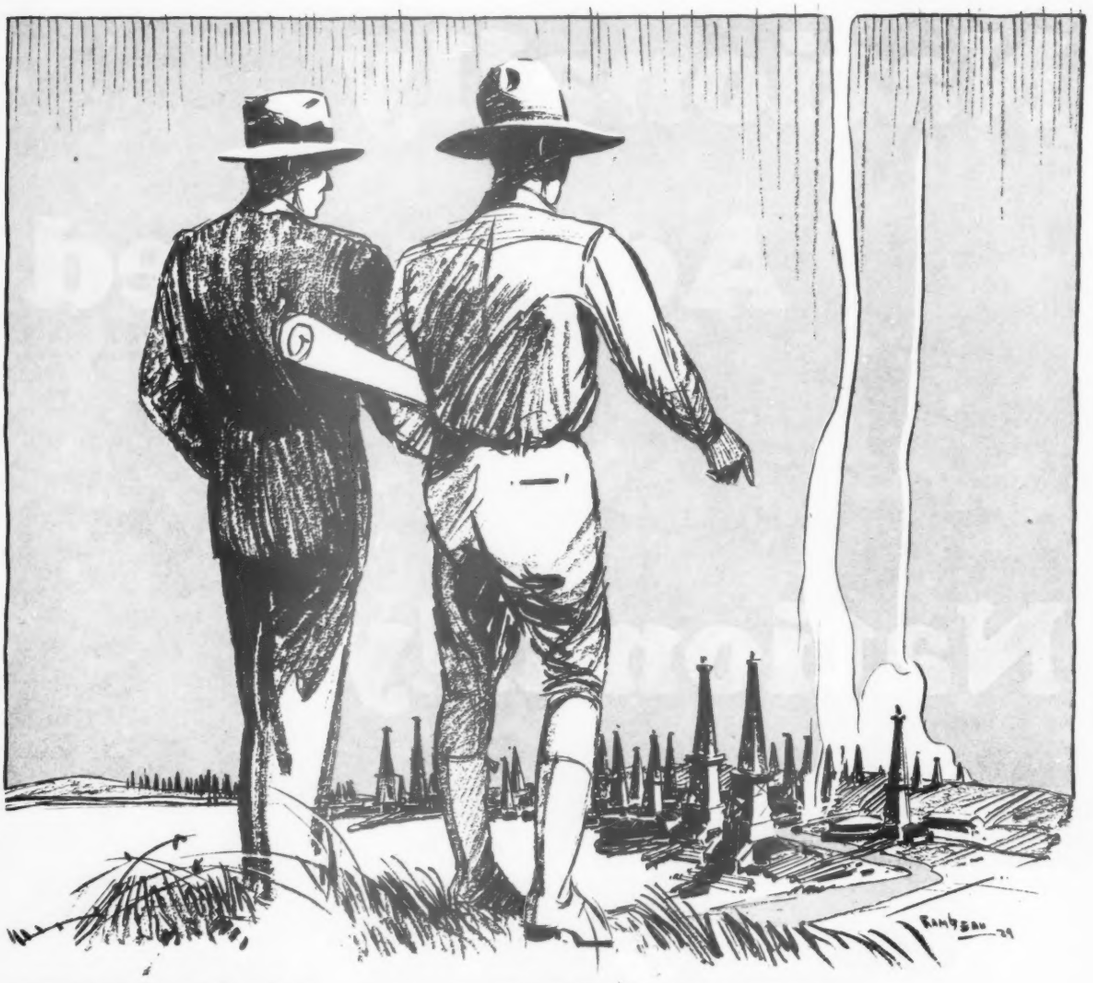
KANSAS CITY ST. LOUIS FT. WORTH TORONTO



"BORIUM AND STOODITE
put us weeks and dollars ahead"

"IF we hadn't studded our bits with BORIUM and faced them with STOODITE, we'd still be drilling. As it is, all of our wells are in . . . in record-breaking time . . . and the 'pulling" of bits was almost eliminated." Throughout the world, wherever man seeks "black, liquid gold," BORIUM (the diamond substitute that's actually superior to diamonds from a practical and economical standpoint), and STOODITE, (the super-hard facing metal) are showing the oil industry a completely new conception of speed and an absolute minimization of such losses as result from delays, "pulling" of bits, etc.

Send for full particulars regarding these two economical, easily applied and tremendously efficient modern necessities

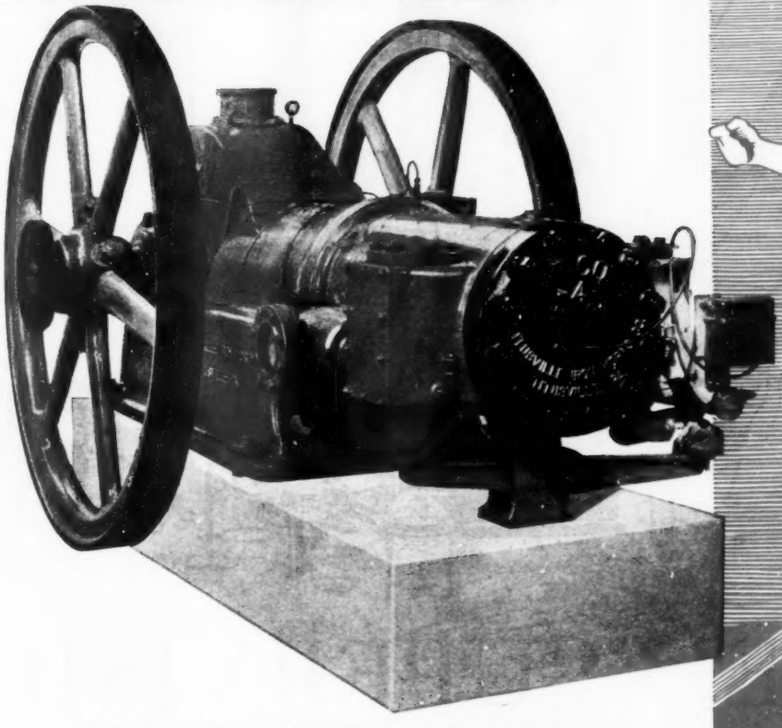
STOODY COMPANY

Manufacturers of **WELDING ROD - ALLOY STEELS - EQUIPMENT**

WHITTIER, CALIFORNIA

NEW! TICO

4 CYCLE GAS ENGINE LEADS THE FIELD!



A larger and heavier unit designed to meet the new demands of the oil industry. When buying new equipment consider your future requirements as well as the present. Get complete information on this new engine from your nearest Continental store.

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SKILLED SUPERVISION

Guarantees the Quality

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COASTAL AND PARAFFINE CRUDES—
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Port Arthur, Texas
Galveston, Texas

CROSS COUNTRY

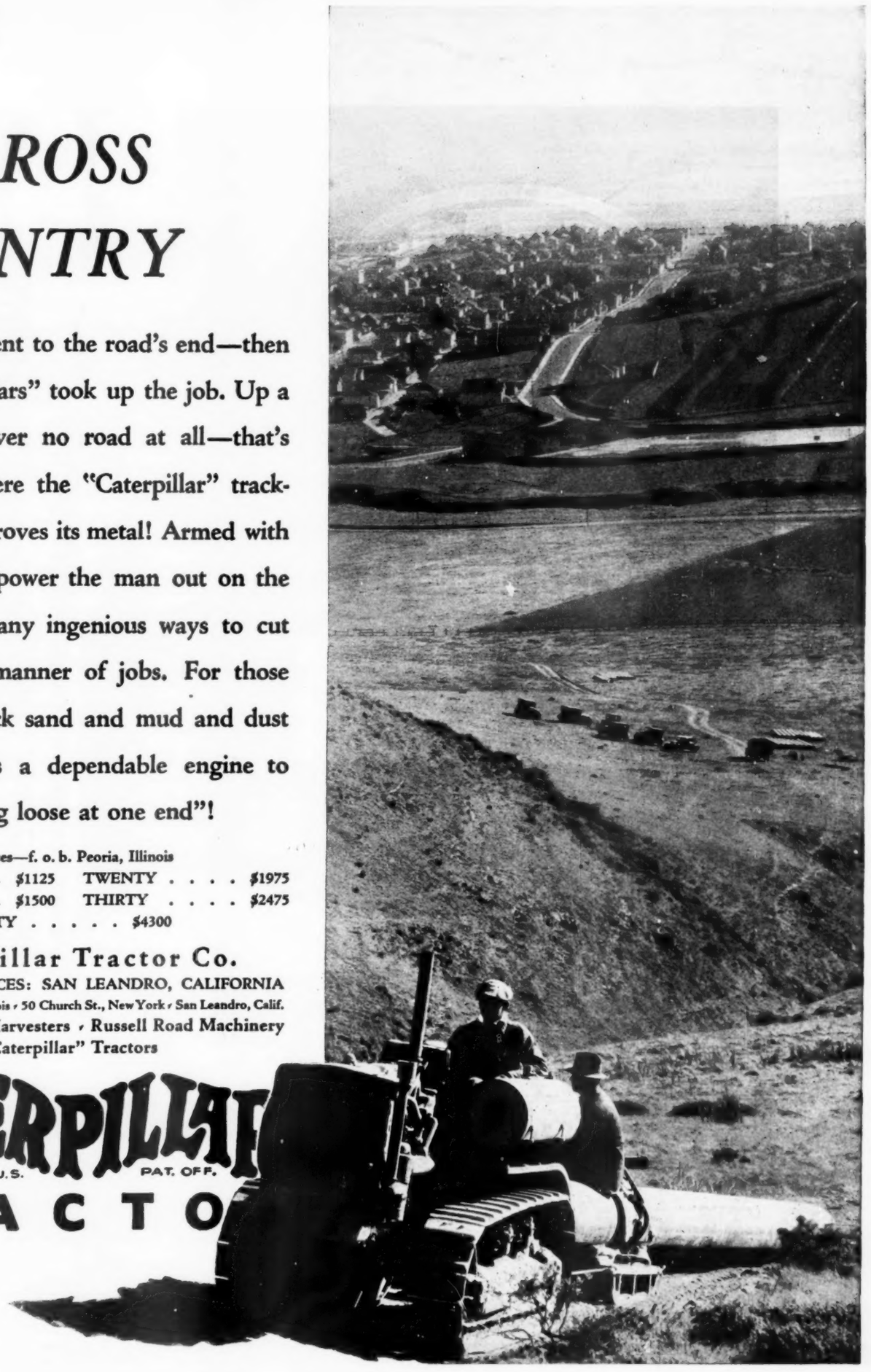
The trucks went to the road's end—then the "Caterpillars" took up the job. Up a stiff grade, over no road at all—that's the place where the "Caterpillar" track-type tractor proves its metal! Armed with "Caterpillar" power the man out on the lease finds many ingenious ways to cut costs on all manner of jobs. For those wide tracks lick sand and mud and dust —and there's a dependable engine to "pull anything loose at one end"!

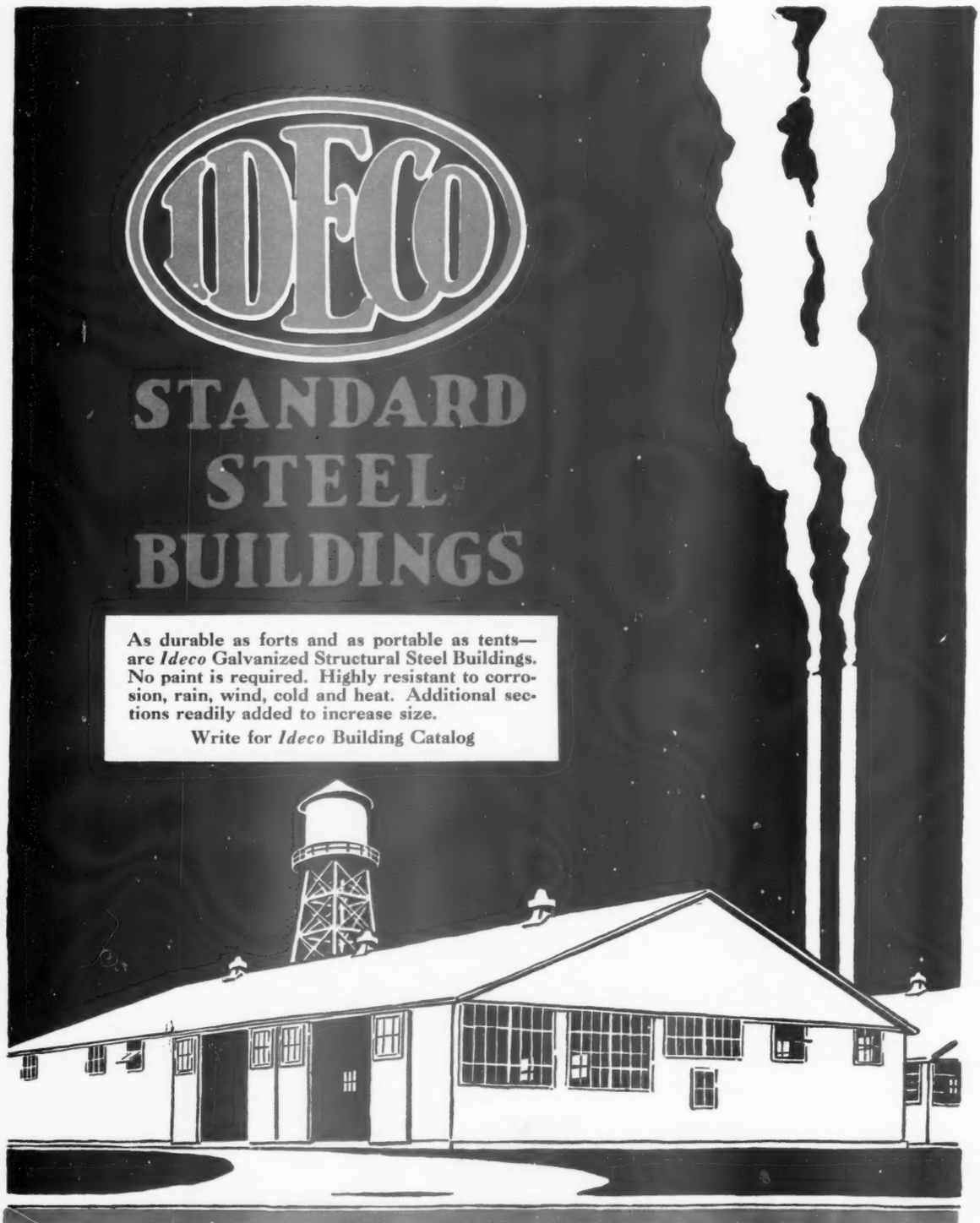
Prices—f. o. b. Peoria, Illinois

TEN	$1125	TWENTY	$1975
FIFTEEN	$1500	THIRTY	$2475
SIXTY	$4300		

Caterpillar Tractor Co.
EXECUTIVE OFFICES: SAN LEANDRO, CALIFORNIA
Sales Offices: Peoria, Illinois · 50 Church St., New York · San Leandro, Calif.
Holt Combined Harvesters · Russell Road Machinery
"Caterpillar" Tractors

CATERPILLAR
REG. U.S. PAT. OFF.
TRACTOR

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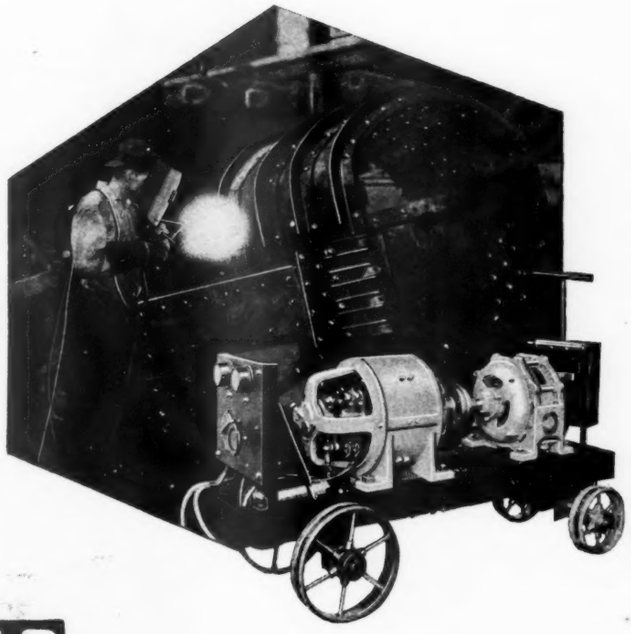
STANDARD
STEEL
BUILDINGS
As durable as forts and as portable as tents—are *Ideco* Galvanized Structural Steel Buildings. No paint is required. Highly resistant to corrosion, rain, wind, cold and heat. Additional sections readily added to increase size.
Write for *Ideco* Building Catalog

The International Derrick & Equipment Co., Columbus, Ohio—Los Angeles, Cal.

Plants: Columbus, Delaware, Ohio; Torrance, California; *Sales Offices:* Columbus, Ohio; New York City, N. Y.; Detroit, Michigan; Dallas, Texas; Wichita, Kansas; Los Angeles, California; Maracaibo, Venezuela; *Warehouses and Yards:* Columbus, Ohio; Tulsa, Seminole, Tonkawa, Drumright, Okemah, Wewoka, Maud, Sasakwa, Allen, Earlsboro, Oklahoma City, Oklahoma; El Dorado, Wichita Heights, Kansas; Bakersfield, Taft, Torrance, California; Houston, Hebbronville, Big Spring, Merkel, Odessa, Pyote, Pampa, Borger, McLean, Mexia, Luling, Texas; Shreveport, Lake Charles, Louisiana; El Dorado, Smackover, Arkansas.

Export Representation—74 Trinity Place, New York City; Columbus, Ohio; Houston, Texas; Los Angeles, Calif.

612



They *tried* 4 *makes* of Welding Machines —then *Standardized* on WILSON

IN the shop where the accompanying picture was taken A. C. Nielsen Company made an intensive study of welding operations in the repair of locomotives, railway cars, cranes, and other contractors' equipment.

Nielsen reports that, in searching for welding equipment that would meet their extremely varied and highly exacting needs, this shop experimented with four different makes of welding machines. And, although each of the first three machines gave satisfactory service in certain kinds of work, all three makes proved incapable of rapid arc adjustment as they were changed from job to job, and thus caused a considerable loss.

Then a Model S Wilson Welding Machine was purchased. Immediately it demonstrated quicker *adaptability*, closer *control*, greater *portability*, and far greater *strength* in welds than the machines previously used. Its superiority was also reflected in *lower power cost, lower total upkeep, and a tremendous saving in time.* As a result, the company *standardized* on *Wilson*, and today, all their welding is done *exclusively* with Wilson Machines.

Regardless of what your industry is, Wilson—with its long and varied experience, with its great accumulation of welding information—can assist you in solving your welding problems.

WILSON WELDER & METALS CO. INC.
18 Wilson Building, Hoboken, N. J.

WILSON

WELDING MACHINES AND WELDING WIRE

In the repair shop referred to above Wilson "Color-tipt" Welding Wire has been used almost *exclusively* for the last five years. As a result of its long experience, this company points out that one of the outstanding advantages of

Wilson Wire is that the *right* grade (analysis) can be selected for the *particular metal* being welded. A sample of the *right* grade of Wilson Wire for the metal *you* are welding will be sent gladly upon request — no obligation.

AMONG CHAMPIONS

PERFECT COORDINATION

A derrick, to be of true championship calibre, must have every part so coordinated as to make an efficient, smoothly operating unit. The Moore Champion Derrick is designed and built in just that way.

Conforms to A. P. I. Standards

THE Moore Champion DERRICK

LEE C. MOORE AND COMPANY, INC., PITTSBURGH · TULSA

ESTABLISHED 1907

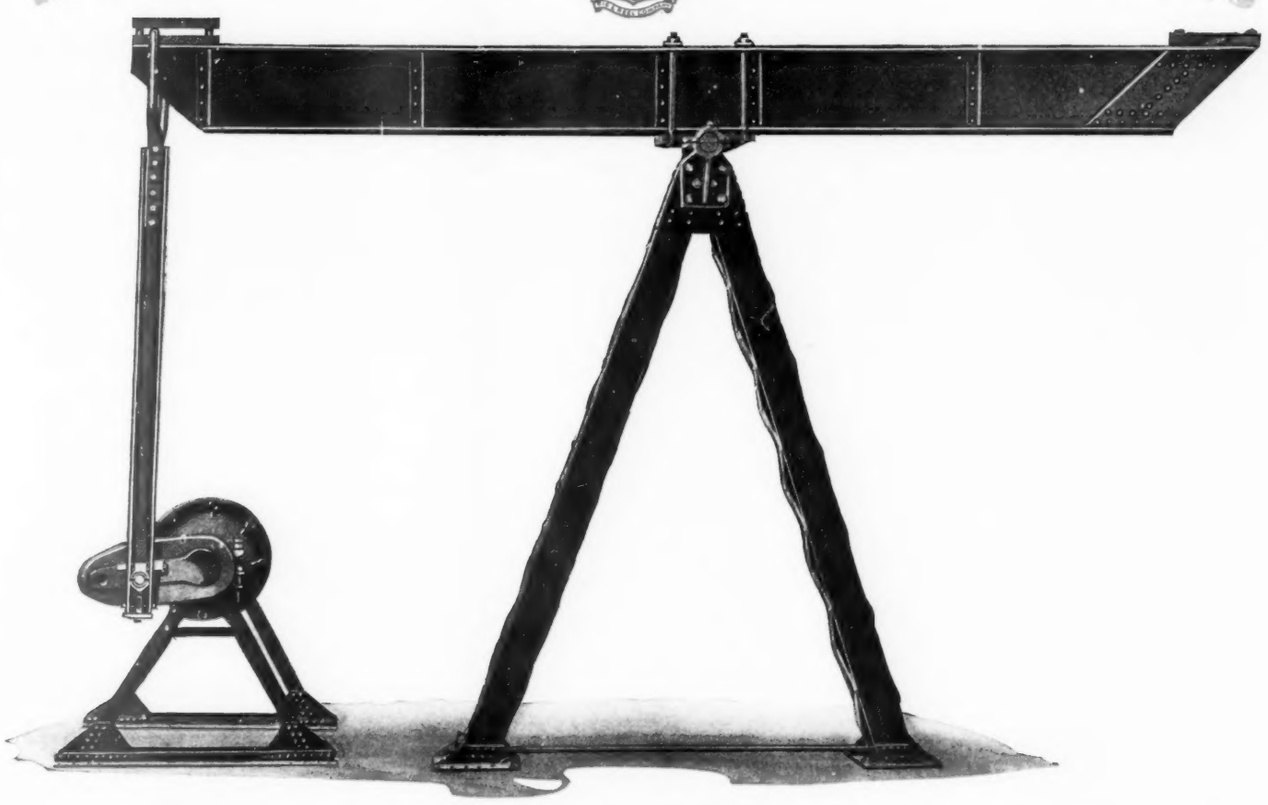
New York Offices: Oilfield Equipment Co., 30 Church St., New York, N. Y.

DALLAS, TEXAS · HOUSTON, TEXAS · WICHITA, KANSAS · CASPER, WYO. · PARKERSBURG, W. VA. · SHREVEPORT, LA.

Stocks in all Principal Fields

PARKERSBURG

Has served the oil fields of the world for 32 years



REDUCE WELL EXPENSE WITH STEEL

Parkersburg "A" Frame Type Steel Sampson Posts and Jack Posts, set on concrete foundations, provide a permanent installation.

Ultimate saving in cost results from elimination of sills and salvage of all material, except foundation and foundation bolts, when moved to new location. Fire hazard is reduced.

Sampson Post is furnished in two sections to facilitate handling and shipping. The two halves are interchangeable and easily assembled.

Jack Posts are supplied in two heights—5′ and 5′6″; for any size Band Wheel.

Parkersburg Steel Walking Beams are furnished in I-Beam and Box Girder Type construction, and in standard lengths.

For details and specifications write for Bulletin "E".

THE PARKERSBURG RIG & REEL COMPANY

EXECUTIVE OFFICES & MAIN PLANT

PARKERSBURG, WEST, VA.

PARKERSBURG PRODUCTS

Steel Derricks and Steel Crown Blocks	☐	Rig Irons (A.P.I. Standard)	☐
Chain Driven Sand Reels and Bailing Reels	☐	Portable Drilling Machines (Wood and All-Steel)	☐
Steel Wheels	☐	Bolted Steel Tanks	☐
All-Steel Standard Rigs	☐	Miscellaneous Drilling Equipment	☐

Check the equipment in which you are interested, tear out and return this coupon, with your name and address, to us, and we will send you complete information on the items checked.

Unified Responsibility

The Hope Company is the one organization serving the natural gas and oil industry which is ready and qualified to assume entire responsibility for a pipe line enterprise "from well to meter." It is not only ready, but it has repeatedly done so—to the satisfaction of all concerned.

More than this, the Company is ready also to undertake field surveys, market analyses, and aid in financing and organization—as it has repeatedly done in the past.

HOPE

ENGINEERS CONTRACTORS

HOPE ENGINEERING COMPANY

DESIGNERS MANUFACTURERS

MOUNT VERNON, OHIO, U.S.A.

NEW YORK, N.Y. TULSA, OKLA. HOUSTON, TEX. LOS ANGELES, CAL.

ay,

A Nickel-Chromium-Alloy developed by Dr. Benno Strauss at Krupp Works, now produced in America.

AMONG the outstanding characteristics of Enduro KA2 are the following:

Resistance to a wider range of corrosive media than any other alloy.

High resistance to oxidation in continuous service at high temperatures—

Complete freedom from embrittlement throughout the entire range of operating temperatures—

Over four times the tensile strength of mild steel on continued heating at 1000°F.

Enduro KA2 can be forged, welded and cold rolled, stamped and deep drawn, either hot or cold as desired. It can be polished to a mirror-like surface.

By virtue of its alloy content, Enduro KA2 is a stable Austenitic alloy. It retains its ductility and high impact strength throughout its wide temperature range.

ENDURO
NIROSTA
KA2 STEEL
(KRUPP AUSTENITIC)

CENTRAL ALLOY STEEL CORP. *Massillon and Canton, Ohio*

LUDLUM STEEL CO. *Watervliet, N. Y.*

THE BABCOCK & WILCOX TUBE CO. *85 Liberty St., New York, N. Y.*

READY! FOR MEN WHO WANT TO KNOW THE FACTS ◆ ◆ ◆ ◆

A NEW BOOKLET has been published showing the wide application of Enduro Nirosta KA2.

Engineers, executives, metallurgists will find it intensely interesting, because this new alloy fills a tremendous gap in industry as a whole.

You will want the facts. This booklet gives the chemical and physical properties of Enduro KA2, general instructions as to its fabrication, the shapes and sizes in which it can be furnished and other valuable information.

Write for it on your business letterhead.

Enduro Nirosta KA2 Available in

Plates · Sheets · Bars · Strips · Forging Blanks · Shapes · Seamless Pipe and Tubing · Welding Rods · Castings · Wire.

ENDURO
NIROSTA
KA2 STEEL
(KRUPP AUSTENITIC)

CENTRAL ALLOY STEEL CORP. *Massillon and Canton, Ohio*

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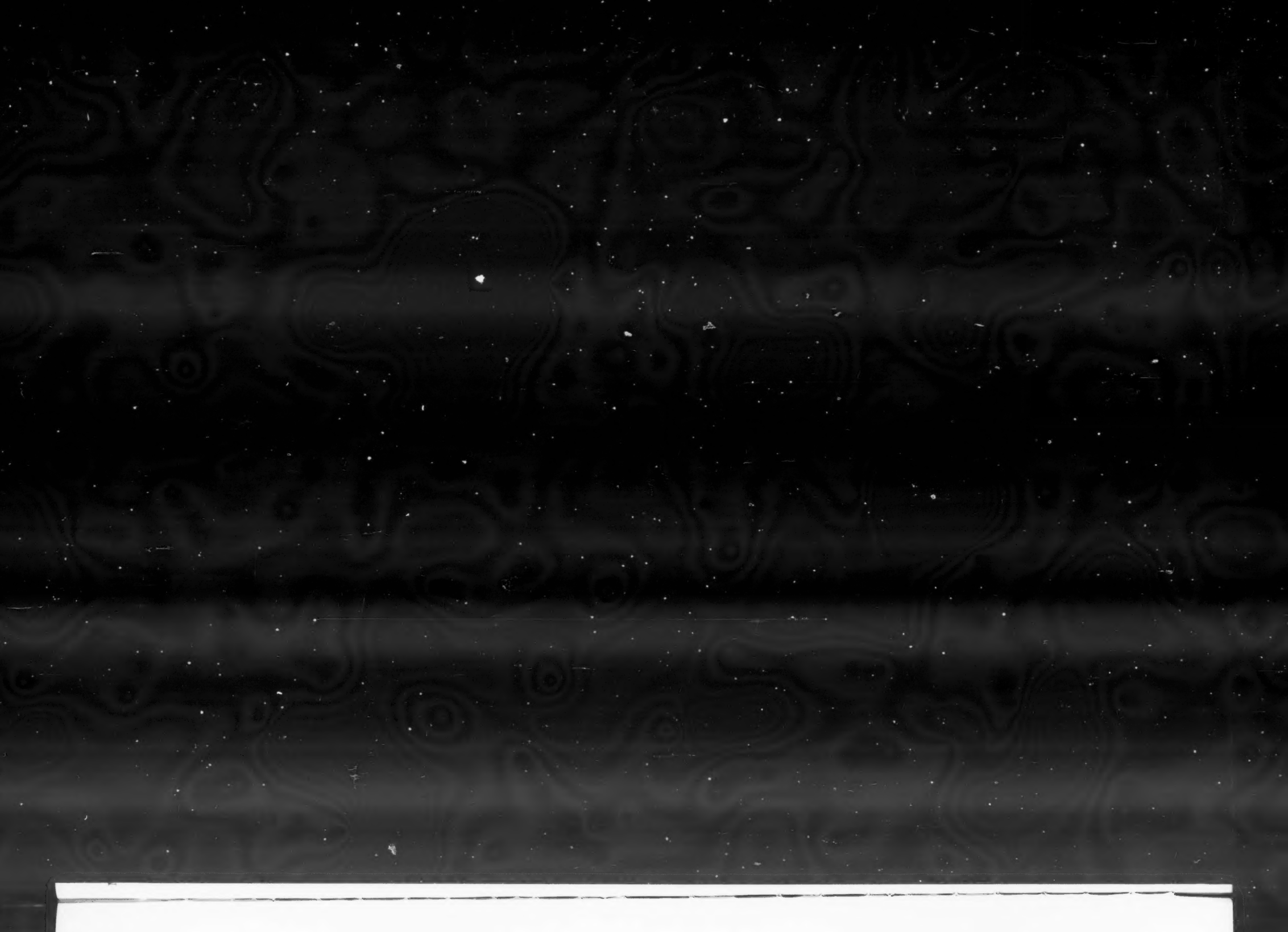
THE BABCOCK & WILCOX TUBE CO. *85 Liberty St., New York, N. Y.*



Where Pipe Meets Marsh, Get 5-Point Protection

Wet soggy ground in oil country soon takes the heart out of ordinary pipe. Where pipe lines meet marshy patches, you need the proved protection of Reading 5-Point Pipe.

Corrosion can't sink its teeth into Reading 5-Point Pipe, because this pipe is made of Genuine Puddled Wrought Iron. We puddle the pure pig iron in the furnace to coat every inmost fiber with silicious slag—a substance that defies corrosive action. Reading 5-Point Pipe is protected all the way through — not merely on the surface!

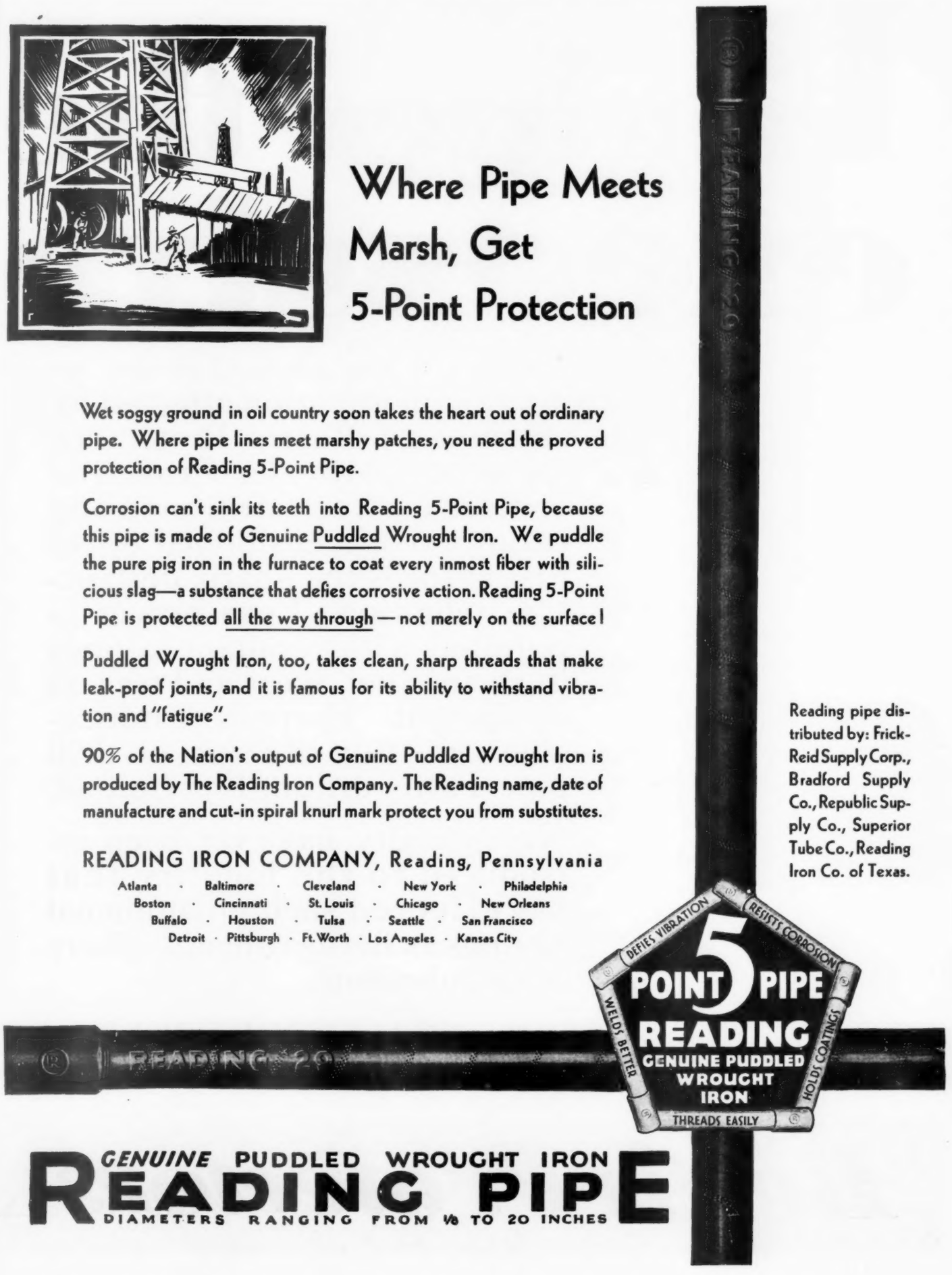
Puddled Wrought Iron, too, takes clean, sharp threads that make leak-proof joints, and it is famous for its ability to withstand vibration and "fatigue".

90% of the Nation's output of Genuine Puddled Wrought Iron is produced by The Reading Iron Company. The Reading name, date of manufacture and cut-in spiral knurl mark protect you from substitutes.

READING IRON COMPANY, Reading, Pennsylvania

Atlanta · Baltimore · Cleveland · New York · Philadelphia
Boston · Cincinnati · St. Louis · Chicago · New Orleans
Buffalo · Houston · Tulsa · Seattle · San Francisco
Detroit · Pittsburgh · Ft. Worth · Los Angeles · Kansas City

Reading pipe distributed by: Frick-Reid Supply Corp., Bradford Supply Co., Republic Supply Co., Superior Tube Co., Reading Iron Co. of Texas.



GENUINE PUDDLED WROUGHT IRON
READING PIPE
DIAMETERS RANGING FROM ⅛ TO 20 INCHES

Reduce the excessive

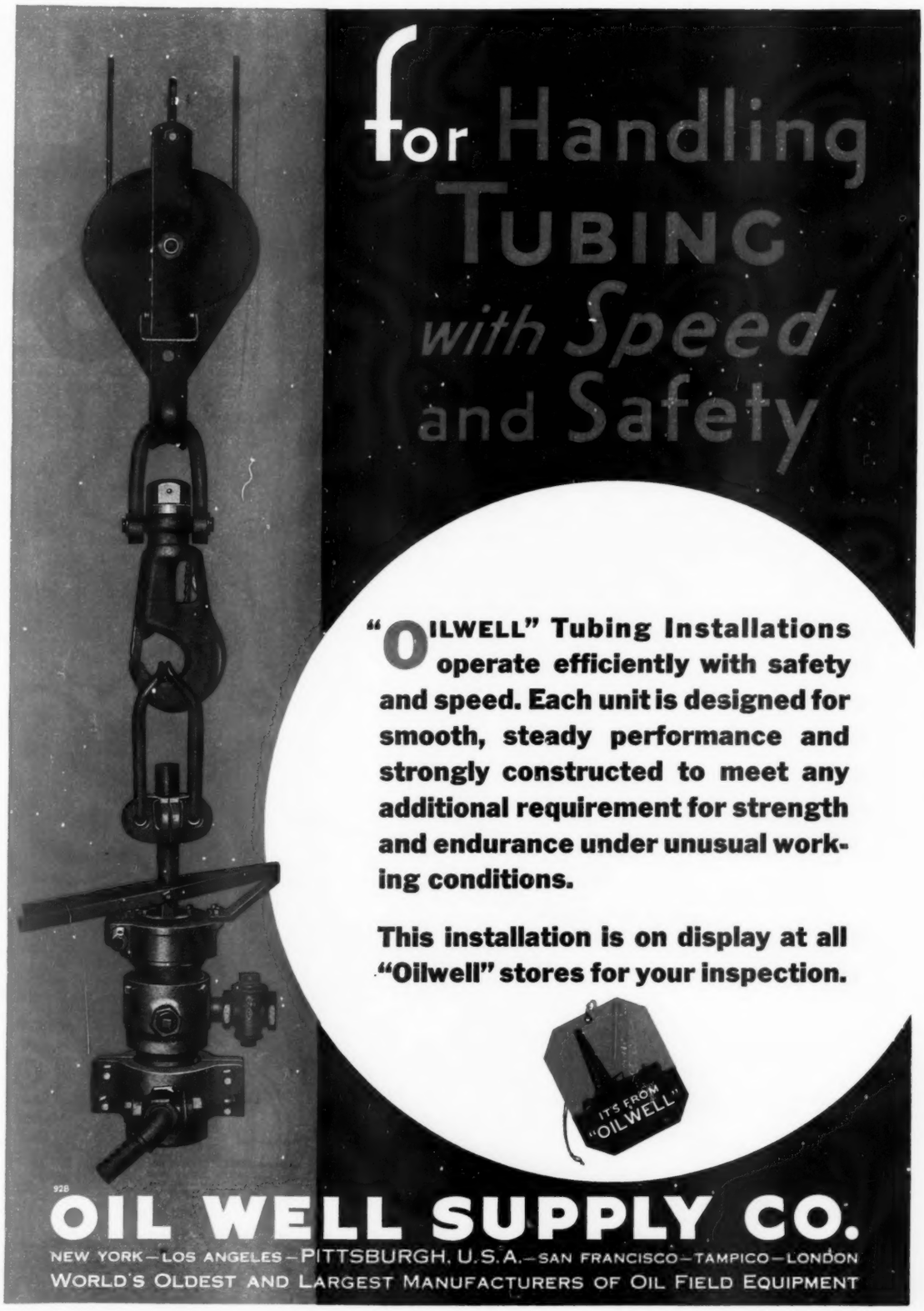
Operators are amazed at the reduction in vibration affected by the use of Bettis Protectors. Elimination of metal-to-metal contact between drill pipe and casing gives a cushioned effect that absorbs the sharp, destructive vibration. Less power is required with resultant savings in steam, fuel, wear and tear on equipment. There is a noticeable reduction of strain on drill pipe. Faster drilling is permitted.

No specialty has ever been introduced to the Industry that has effected such phenomenal savings as Bettis rubbers. There is no substitute.

"Best bet yet!"

The original genuine rubber protectors--- seamless, hingeless, no metal added to hole. Fully patented.

Bettis Protectors


for Handling
TUBING
with Speed
and Safety
"OILWELL" Tubing Installations operate efficiently with safety and speed. Each unit is designed for smooth, steady performance and strongly constructed to meet any additional requirement for strength and endurance under unusual working conditions.
This installation is on display at all "Oilwell" stores for your inspection.
IT'S FROM "OILWELL"
928
OIL WELL SUPPLY CO.
NEW YORK—LOS ANGELES—PITTSBURGH, U.S.A.—SAN FRANCISCO—TAMPICO—LONDON
WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

EMSCO

Steel Equipped

WELLS

Are Safe

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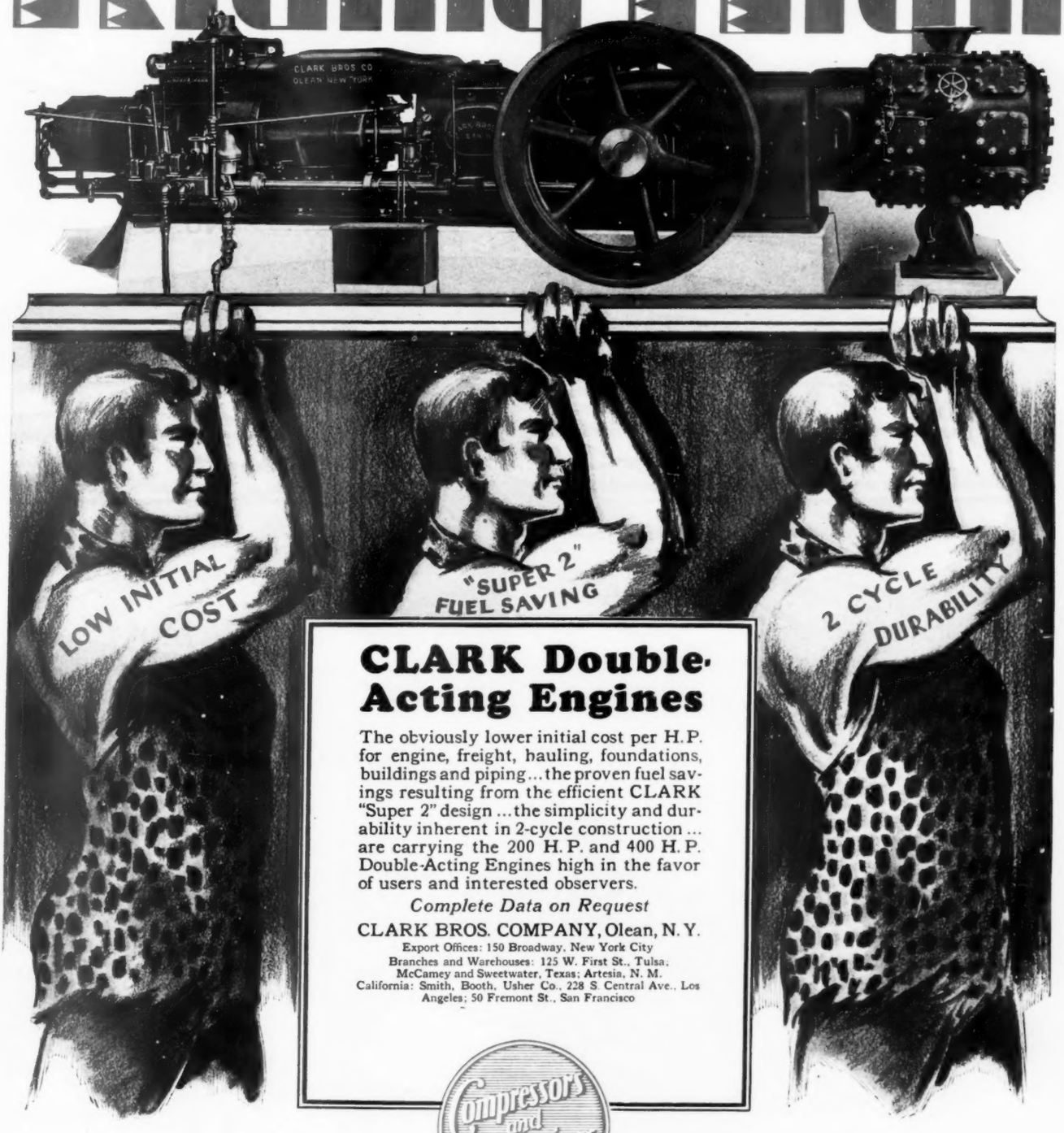
LOS ANGELES, CALIFORNIA
HOUSTON, TEXAS, DALLAS, TEXAS
EXPORT OFFICE: 150 BROADWAY
NEW YORK CITY, N.Y.
U.S.A.

Riding High



CLARK Double-Acting Engines

The obviously lower initial cost per H.P. for engine, freight, hauling, foundations, buildings and piping ... the proven fuel savings resulting from the efficient CLARK "Super 2" design ... the simplicity and durability inherent in 2-cycle construction ... are carrying the 200 H.P. and 400 H.P. Double-Acting Engines high in the favor of users and interested observers.

Complete Data on Request

CLARK BROS. COMPANY, Olean, N.Y.

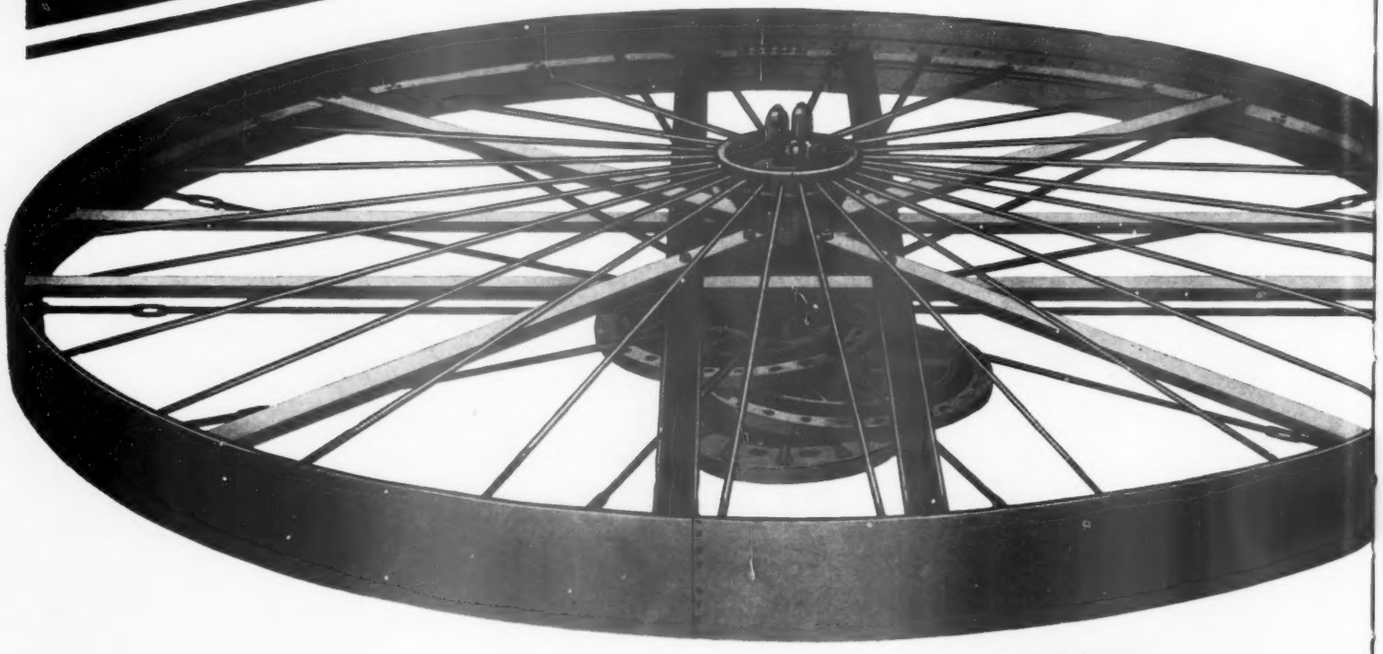
Export Offices: 150 Broadway, New York City
Branches and Warehouses: 125 W. First St., Tulsa; McCamey and Sweetwater, Texas; Artesia, N. M.
California: Smith, Booth, Usher Co., 228 S. Central Ave., Los Angeles; 50 Fremont St., San Francisco

Compressors and Gas Engines

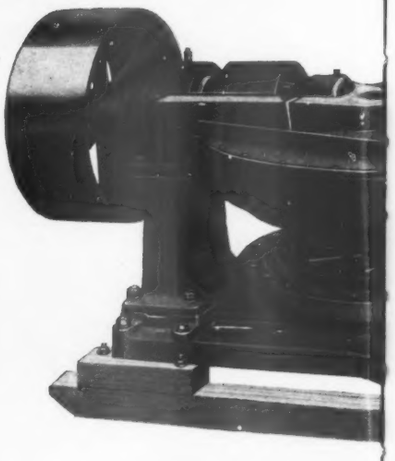
CLARK

NATIONAL

No. 15C BAND WHEEL



No. 6 GEARED



No. 7 GEARED

NATIONAL
COMPANY

Making phenomenal records at Kettleman Hills

More than 42,000 feet were made by B. J. Rotary Disc Bits for ONE Company at Kettleman Hills during the past four months.

With the new B. J. heat-treatment and special B. J. hard-facing process B. J. Disc Bits are better than ever.

Plain, marcelled and staggered discs, set with inserts.

Fully Patented

BYRON-JACKSON CO.
OIL TOOL DIVISION
2150 E. Slauson Avenue, Los Angeles, California

Tulsa, Okla. *(Warehouse)*
214 E. Brady St.

Houston, Texas
2201 Breckenridge Street

Fort Worth, Texas
814 Dan Waggoner Bldg.

New York City
1245 Graybar Building

B·J·Rotary Disc Bits

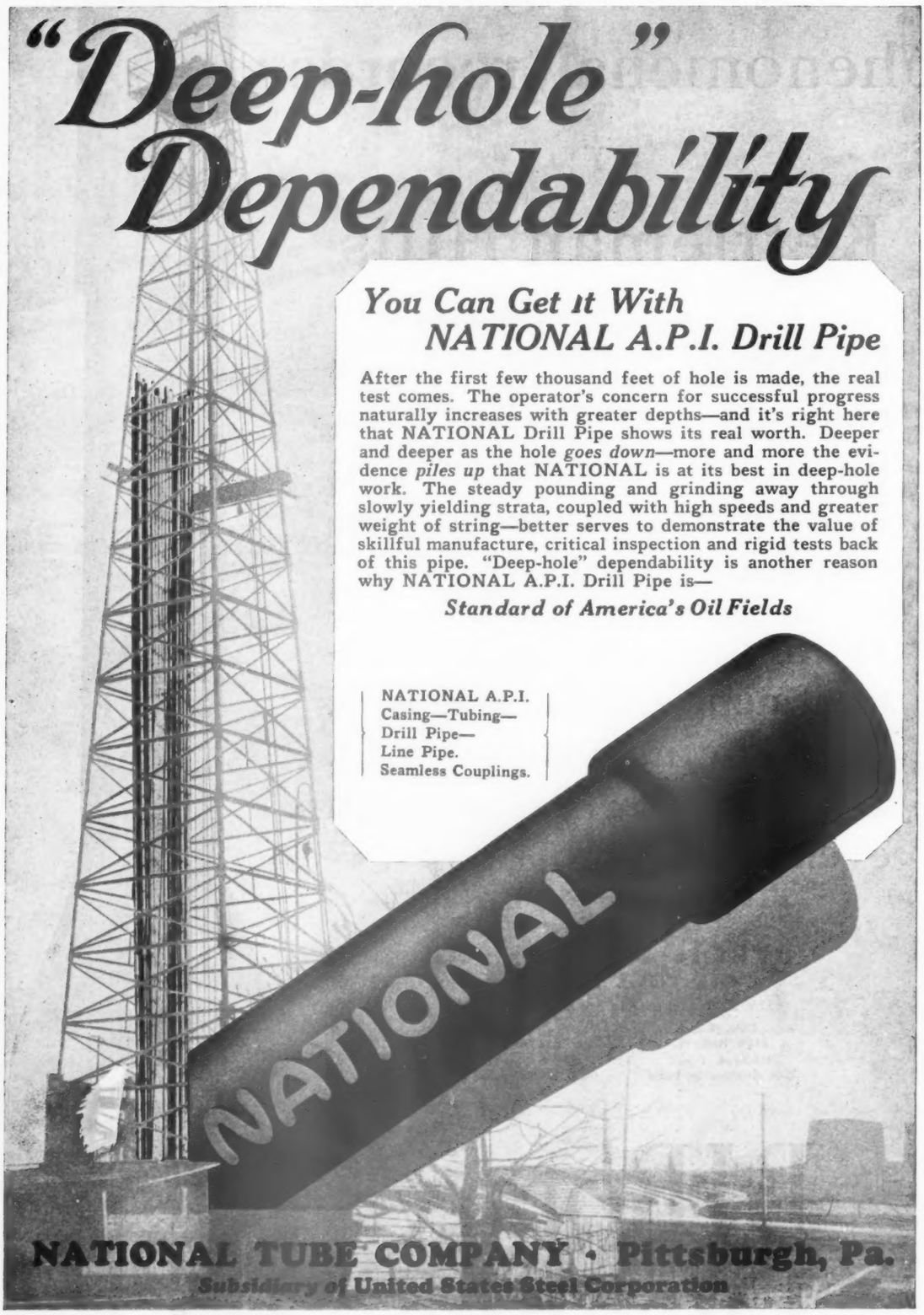
"Deep-hole" Dependability

You Can Get it With NATIONAL A.P.I. Drill Pipe

After the first few thousand feet of hole is made, the real test comes. The operator's concern for successful progress naturally increases with greater depths—and it's right here that NATIONAL Drill Pipe shows its real worth. Deeper and deeper as the hole *goes down*—more and more the evidence *piles up* that NATIONAL is at its best in deep-hole work. The steady pounding and grinding away through slowly yielding strata, coupled with high speeds and greater weight of string—better serves to demonstrate the value of skillful manufacture, critical inspection and rigid tests back of this pipe. "Deep-hole" dependability is another reason why NATIONAL A.P.I. Drill Pipe is—

Standard of America's Oil Fields

NATIONAL A.P.I.
Casing—Tubing—
Drill Pipe—
Line Pipe.
Seamless Couplings.

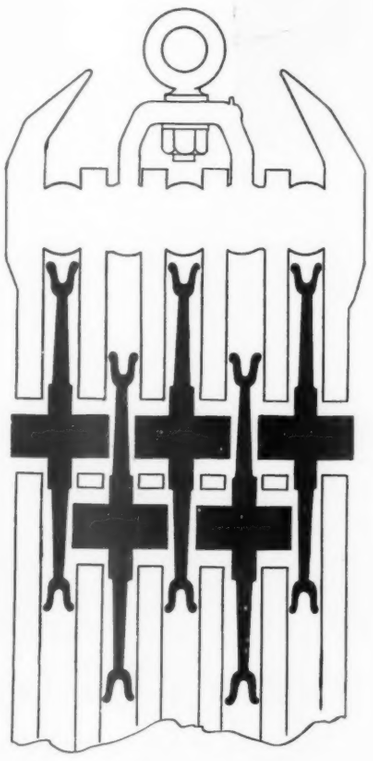


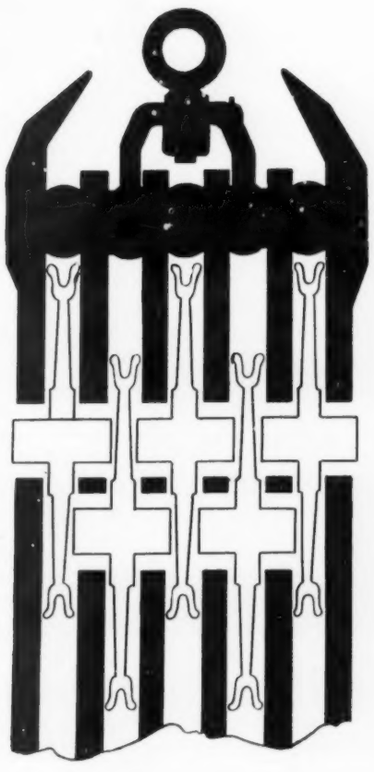
NATIONAL TUBE COMPANY · Pittsburgh, Pa.

Subsidiary of United States Steel Corporation

The big hefty Regan Block

Extreme *Rigidity* Dual Bearings





Fully Patented

The staggered construction of the sheaves permits greater bearing area. Dual bearings for each sheave offer great rigidity and prolong the life of each bearing. The pin and sheave are integral.

Note the heft of the straps and strap pins. The upper pin is 3″, the lower 4″. Straps are 2″ x 12″. The complete assembly is as rigid as a solid unit capable of carrying overloads without strain. All contacting parts machined and entire assembly is rigidly bolted.

Regan
Forge & Engineering Co.
At the foot of Regan St. Quality *San Pedro California*

Branch Offices

Main Office New York City
Mid-Continent Division: 75 West St.
Dallas, Texas Wm. Brast, Manager
1504 Magnolia Bldg. Maracaibo, Venezuela
Oklahoma City, Okla. Wm. Adams,
2420 W. 21st St. Care Amer. Consul
Pecos, Texas, P. O. Box 444
Pampa, Texas

The unusual care which South Chester gives to Crusher Tests and all other tests and inspections makes for satisfactory service in the line.

One Hundred Miles of Plain End Welded Pipe Without a Single Leak

Field test on the one hundred mile line, of which these trainloads were a portion, demonstrated the free welding qualities of South Chester Pipe resulting from extreme care in selection of raw material and the freedom from crystallization and lamination so important in welded lines.

Chester also makes all classes of Genuine Wrought Iron Tubular Goods

South Chester Tube Company—Chester, Pa.

District Sales Managers:

W. E. Gibson
801 Columbia Bank Bldg.,
Pittsburgh, Pa.

H. A. Morse
30 Church St.,
New York City

J. P. Cooney
715-716 A. G. Bartlett Bldg.,
Los Angeles, Cal.

J. P. Steele,
305 Petroleum Bldg.
Fort Worth, Texas

District Offices:

Tulsa, Oklahoma—J. D. Swartz, 247 West 13th St., Tulsa, Oklahoma
Houston, Texas—P. H. Selk, Jr., 2108 Mills St., Houston, Texas
District Warehouses: Houston, Texas; Thenard, Calif.

Distributors:

Prichard Supply Co.
Mannington, W. Va.
Mather and Waynesburg, Pa.
LeValley, McLeod, Kinkaid Co., Inc.
Elmira and Olean, N. Y.

Petroleum Supply Co.
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Wagner Supply Co.
Fort Worth, Cross Plains, Breckenridge, Iraan, Wink, Forsan, and Odessa, Texas.

Bridgeport Machine Co.
Wichita, Kans.
And branches throughout Kansas and Oklahoma.

United Oil Well Supply Co.
712 A. G. Bartlett Bldg.,
Los Angeles, Calif.
Great Northern Tool & Supply Co.
Billings and Kevin, Mont.
Kemmerer and Cody, Wyo.

CHESTER
LINE PIPE

THE ONLY BOMB BETTER THAN A ZERO HOUR BOMB IS TWO

ZERO HOUR BOMBS - - - - - AND THAT'S THE ZERO HOUR DUPLEX

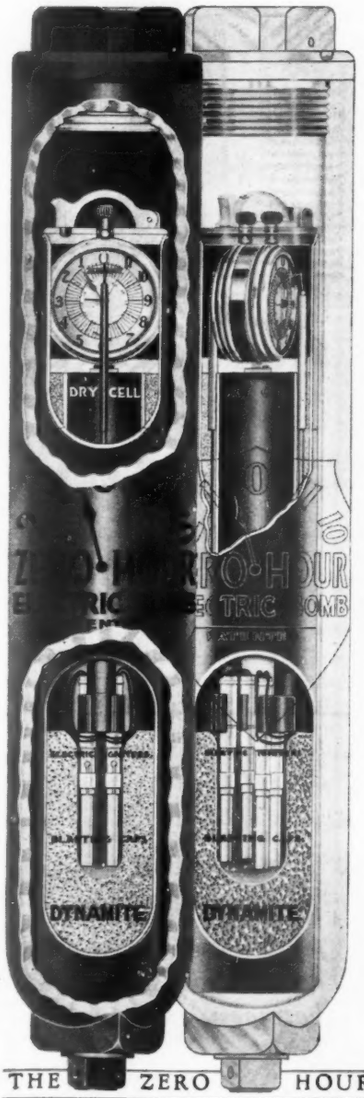
Announcing the

DUPLEX

Zero Hour

Electric Bomb

Plug and Socket Connectors ····· Improved Firing Pin



ONE OF our customers once made the statement that "The only bomb better than a Zero Hour Bomb is two Zero Hour Bombs." Taking him at his word, we at once determined that if the Zero Hour Electric Bomb could be made better, we would make it so. The result is the Zero Hour Duplex Bomb, which is, in effect, actually two Zero Hour Bombs in one.

Here is a bomb so carefully designed, so super-dependable and so safe to handle as to brand any other method of detonating oil well shots at once obsolete and hazardous to your investment. The new Duplex model, though exactly the same size as the earlier models, contains **two** watches, each connected through a separate circuit to two blasting caps, joined in parallel. Thus, **two** timing mechanisms, each independently powered by its own watch, are enclosed in the same metal, fluid-tight container which formerly held one only. When this duplex timing mechanism has been loaded and sealed in its metal container, the chances of the bomb's failure to function are so small that they are almost beyond computation in ordinary mathematics.

An improved "firing pin" permits the hour hand of the watch to be moved past it, either **forward** or **backward,** any number of times, in testing, without deranging it a fraction from the Zero Hour, at which it is originally set. "Plug and socket" connectors materially simplify loading and assembling operations.

We are of the firm opinion that the Zero Hour Duplex Bomb embodies the surest, safest and most economical method of detonating oil well shots that has ever been devised Prices and full information will be sent upon request.

The Duplex and other models are obtainable through all principal torpedo companies.

Zero Hour
Electric Bomb

THE ZERO HOUR TORPEDO CO., 408 COSDEN BLDG., TULSA, OKLAHOMA

Simple and Dependable

That Is Why the *New* BAKER Drill Pipe Float Valve Is Deep in the Driller's Confidence

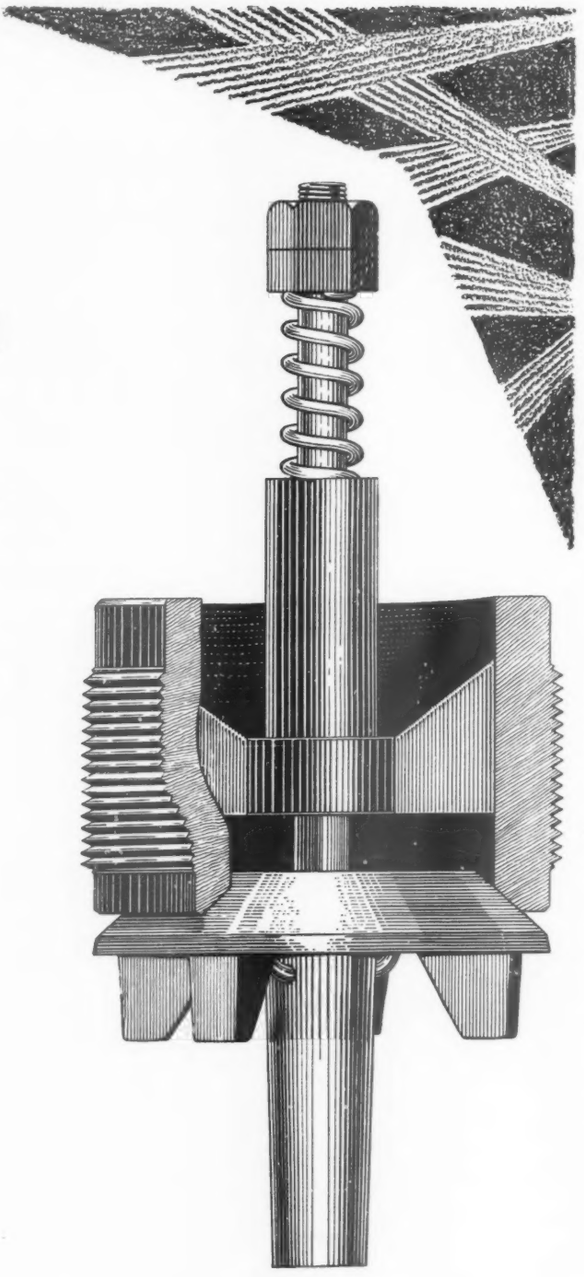
Floating the drill pipe in, is the safe and economical way, and the Baker Drill Pipe Float Valve is the simplest, sturdiest and most dependable float valve on the market today.

A deeper and stronger cross member.

Nickel Chromium Valve Stem.

A thinner Valve Seat.

Larger passageway for the Circulation.



BAKER
OIL TOOLS. INC.
(Formerly Baker Casing Shoe Company)
Box L, Huntington Park, Calif.

California Branches:
Coalinga Taft Bakersfield Ventura

Mid-Continent Branches: Tulsa, Okla.; Houston, Texas
Export Sales Office: 25 Broadway, New York City

Mid-Continent Distributors: B & A Specialty Co.
220 E. Brady St., Tulsa, Okla.; 2301 Commerce St., Houston, Texas

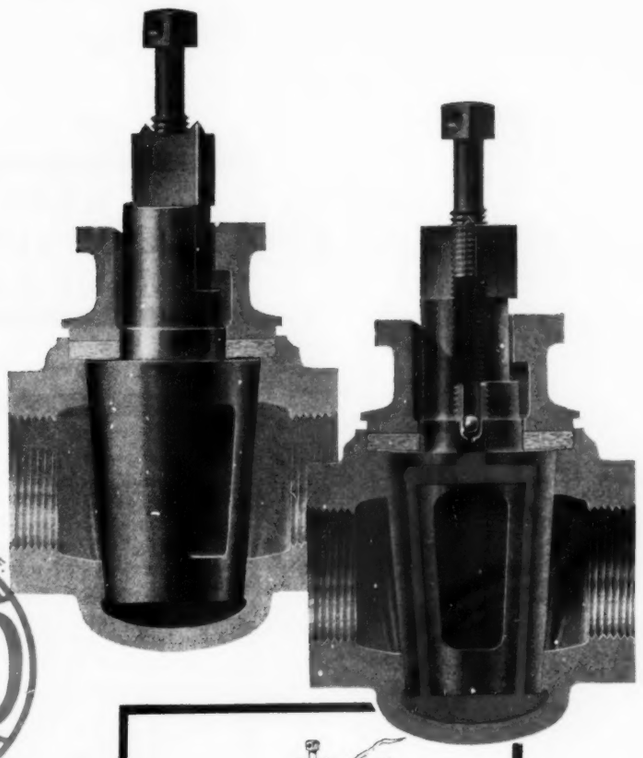
View of the complete assembly ready for insertion between the tool joints.

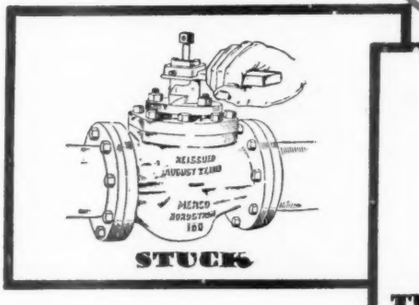
The plug is tapered -and lubricated

It wont stick -or leak

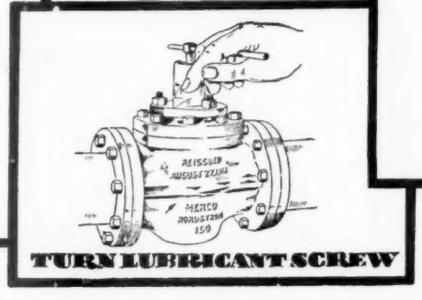
REG. U.S. PAT. OFF.

MERCO

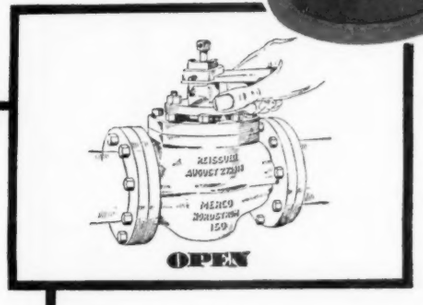




STUCK



TURN LUBRICANT SCREW



OPEN

Before the introduction of the lubricated Nordstrom Valve, sticking and leaky valves were necessary evils of the Petroleum Industry.

But the Nordstrom Valve revolutionized valve services by the simple but efficient method of applying hydraulic pressure to a lubricant, thus positively eliminating "frozen" parts and wasteful leaks.

In addition, the lubricating principle of the Nordstrom Valve prevents all foreign matter from entering the valve and does away with the dangers of exposure to the corrosive or errosive action of the line contents.

Our fully illustrated Catalog No. 6 explains in detail the many advantages of Nordstrom Valves for your plant.

Send for your copy today!

Merco Nordstrom Valve Company

Subsidiary of The Merrill Company

Engineers - - - Manufacturers

Boston—184 Boylston St.
Buffalo—Genesee Bldg.
Chicago—176 W. Adams St.
Dallas—Magnolia Bldg.
Detroit—2842 W. Grand Blvd.
Houston—Petroleum Bldg.
Los Angeles—556 S. San Pedro St.
New Orleans—Masonic Temple Bldg.
New York—11 W. 42nd St.
Pittsburgh—Clark Bldg.
San Francisco—343 Sansome St.
Seattle—Colman Bldg.

Agencies in Principal Cities

Factories: Oakland, California and Belleville, New Jersey

Canadian Manufacturers—Pescock Bros., Ltd., Montreal, Cobalt, Winnipeg, Vancouver.
England—Audley Engineering Co., Ltd., Newport, Shropshire.

For The Petroleum Industry

Nordstrom Valves, made in various types to meet the special conditions found in the Petroleum Industry, are obtainable in various pressure ratings and are made of various metals such as all-iron, semi-steel, cast-steel, chrome-steel, "Mercoloy", "Merco" Bronze, etc., as well as the "Venturi" type.

Types and Uses

All-Iron	Concentrated sulphuric acid in the treating plant, (60 to 66 degrees Baume).
Semi-Steel	Hot distillates, asphalt and crude oil in refineries, mud pump lines, pump manifolds, boiler blow-offs and gas fuel lines in production.
Cast-Steel	For all services where the fire hazard is important.
"Mercoloy" "Merco" Bronze	Dilute sulphuric acid in refineries.
Multi-Port	Naphtha and distillates in refinery tail houses.
1500 lb. Valve in Cast Steel or Jewell Steel	High pressure gas in repressuring rock formation and air and gas lifts, compressor house manifolds and "Christmas Trees."
500 lb. Valve Semi-Steel	Intermediate pressures on gas and air lines.
"Venturi"	Gas from cracking units, vapor recovery plants, loading racks, hot oil lines, pump manifolds, tail house naphtha lines, etc.

The Lubricant Is Of Special Composition

We have developed a series of lubricants with various properties which make them suitable to a wide range of valve services. "Merco" Lubricants are carefully compounded from the best materials to withstand the conditions of the services for which they are recommended, and are available in many types.

Nordstrom Valves

"REPUBLIC"
The BUYING GUIDE
FOR QUALITY PIPE
There are many good American names that are guideposts in every line of endeavor—names which, when mentioned, immediately bring to mind accomplishment, progress, or leadership.
Lincoln—Hill—Edison—Ford—Lindbergh... they will always stand as measures of achievement in their fields.
"Republic," like other significant names, is a proven guide in the steel pipe industry—a buying guide to quality steel pipe for the oil and gas fields.
PRODUCTS
Tubing
Casing
Line and
Rotary
Drill Pipe
REPUBLIC

REPUBLIC
IRON & STEEL CO. YOUNGSTOWN O.
PIPE & CASING

Branch Offices

Birmingham, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, El Paso, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Seattle, St. Louis

Seamless

CASING
TUBING
DRILL PIPE
(Regular and Heat Treated)
LINE PIPE
STILL TUBES

Welded

CASING
STANDARD PIPE
LARGE O. D. PIPE
LINE PIPE
DRIVE PIPE
DRILL PIPE

Sizes 2 inch to 13⅜ inch O. D.

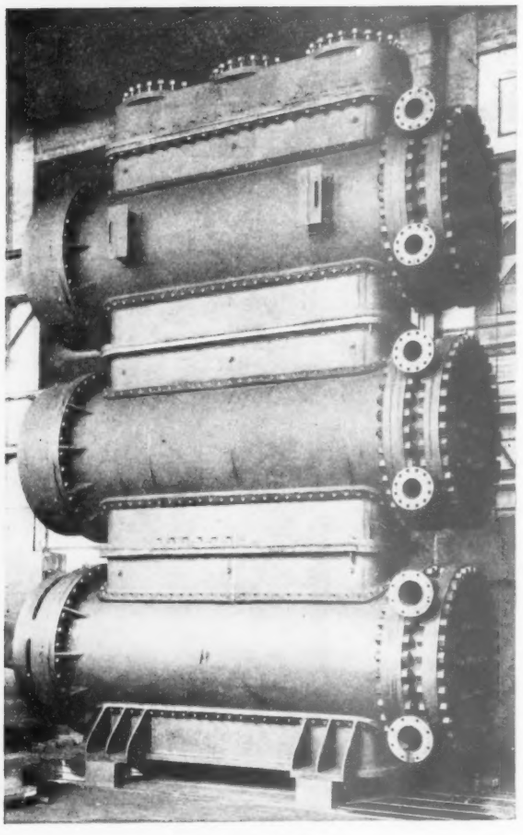
Since 1828

Sizes ⅛ inch to 24 inch O. D.

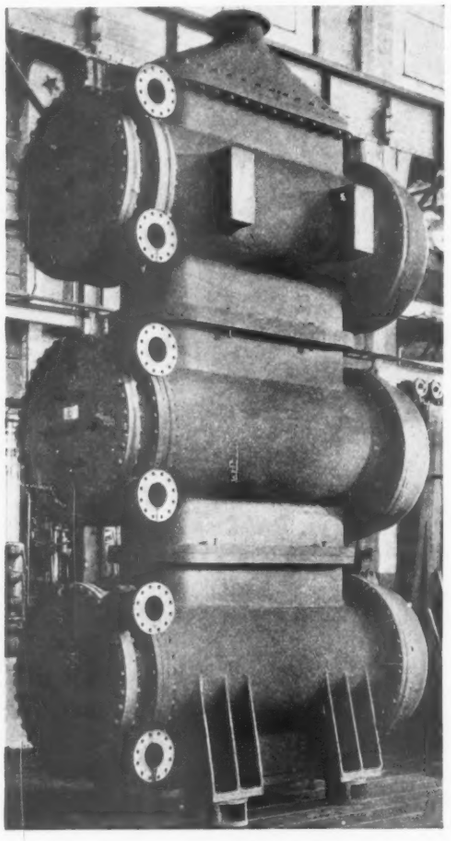
SPANG, CHALFANT & CO., INC.

GENERAL OFFICES, CLARK BLDG.
PITTSBURGH

Sales Offices: Chicago, Ill. New York, N. Y. St. Louis, Mo. Pittsburgh, Penna. Tulsa, Okla. Los Angeles, Calif.
Mills: Etna, Penna. Sharpsburg, Penna. Ambridge, Penna.



Vacuum Unit
Steel Plate Shells



Atmospheric Unit
Cast Iron Shells

Vapor Heat Exchangers and Condensers

Foster Wheeler heat exchangers are designed for effective operation and long life. The large rectangular vapor connections provide:

(1) Low pressure drop.
(2) Perfect Distribution of Vapors and Condensate.
(3) Elimination of Baffles.
(4) Minimum Corrosion.

FOSTER WHEELER CORPORATION
165 Broadway, New York, N. Y.
Branches in Principal Oil Centers

Foreign Associates:
Foster Wheeler Limited, London, England.
Foster Wheeler Limited, Toronto-Montreal-Vancouver, Canada.

FOSTER WHEELER

The INTERNATIONAL HARVESTER
SIX-SPEED SPECIAL *has a* 2-SPEED AXLE

The Only SPEED TRUCK Built with *Two Complete Power Ranges*

This truck will Out-Pull, Out-Climb, and Out-Perform any truck of similar rating under full load

The International line also includes the Special Delivery for loads up to ¾-ton; 4 and 6-cylinder Speed Trucks of 1¼, 1½, and 2-ton sizes; Heavy-Duty Trucks ranging from 2½-ton to 5-ton sizes; Motor Coaches and McCormick-Deering Industrial Tractors. Sold and serviced by 172 company-owned branches in the United States and Canada, and dealers everywhere.

INTERNATIONAL

THIS new 1-ton truck — the International Six-Speed Special — has already rolled up a remarkable reputation, not only in this country, but also in Canada and foreign lands.

Sales have been breaking records and the performance of the truck is setting new records in every kind of hard hauling.

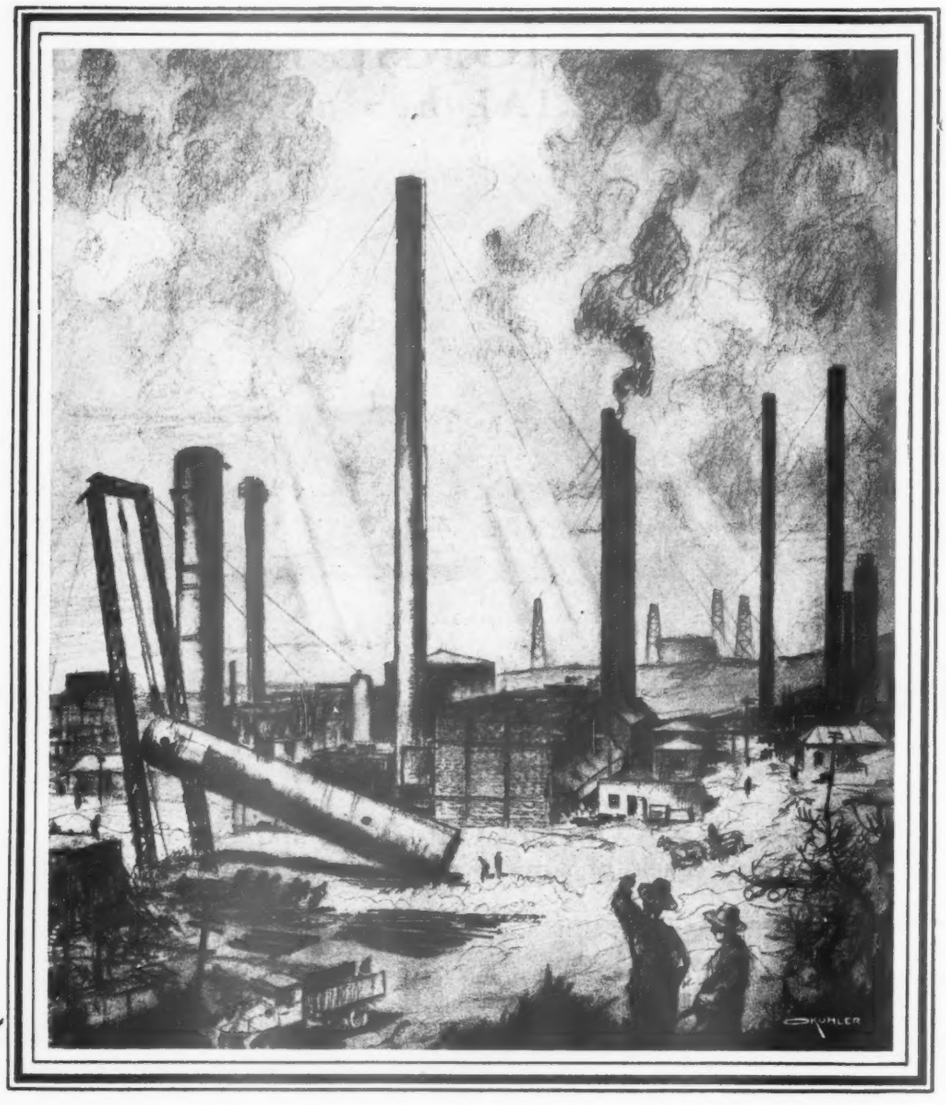
No other truck built is like The Six-Speed Special. It has a 2-speed axle, giving it six speeds forward and two reverse—making two complete power ranges. A light shift of the auxiliary lever throws from one range to the other instantly. And there you are—as the going demands—fleet speed for the straightaway or ten times the pulling power for your capacity loads in the toughest going.

There are four-wheel brakes to balance the speed with safety; every chassis member is designed and built to stand the strain of the tremendous tractive power; and the engine itself demonstrates real all-around operating economy.

See this unusual truck—drive it—try it on your job—give it any test. You've never seen a truck built like The Six-Speed Special and you've never seen one equal its performance. And you'll like the low price as well as the truck.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA
(Incorporated)
606 So. Michigan Ave. Chicago, Illinois

INTERNATIONAL TRUCKS



KELLOGG CONSTRUCTION PROVIDES ECONOMY DEMANDED BY CHANGING CONDITIONS

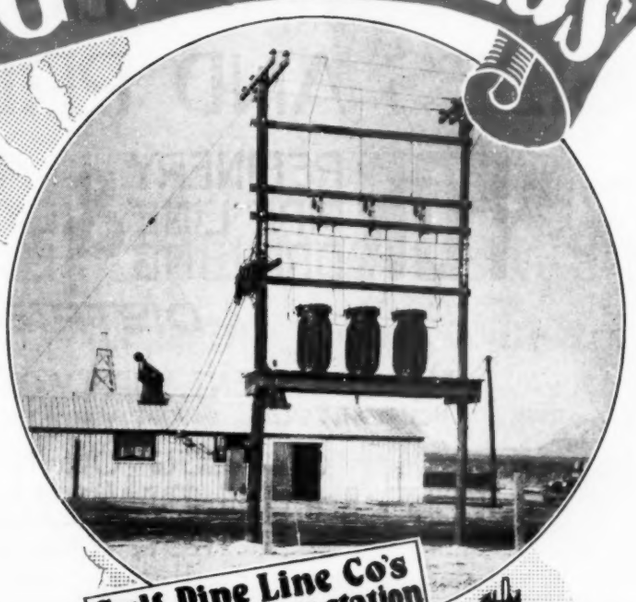
Through scientific design, each Kellogg-built refinery assures maximum thruput on a given schedule, and also provides unequalled flexibility for change-over without loss of operating efficiency.

The M. W. KELLOGG COMPANY

225 Broadway, New York

HOUSTON, TEXAS, 1514 PETROLEUM BLDG. LOS ANGELES, CAL., 1031 SO. BROADWAY TULSA, OKLA., PHILTOWER BLDG.

SERVING West Texas



Gulf Pipe Line Co's Electric Pump Station at Yates Field, Pecos County, Texas - served by West Texas Utilities

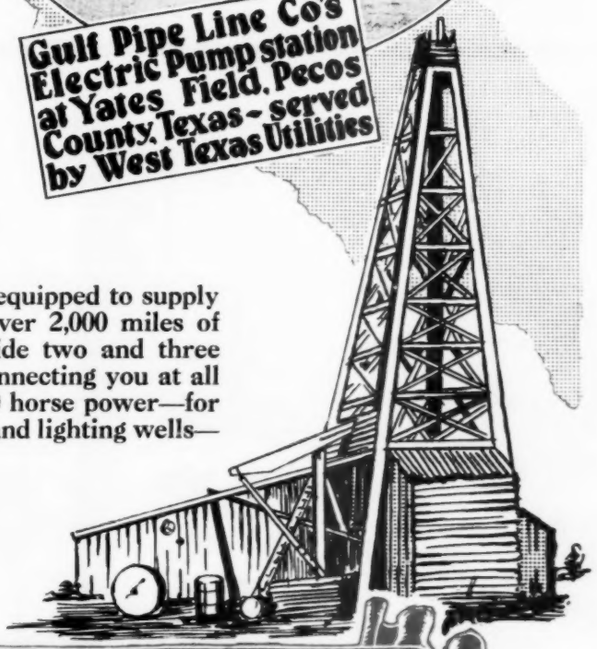
Before You Buy MORE Power Equipment

—let our Engineers estimate the savings you can make by changing to ELECTRICITY.

In the Yates— Trans Pecos Field

—or the Jones, Callahan, Eastland, Shackelford and Fisher County Fields—

—West Texas Utilities Company is well equipped to supply your EVERY demand for POWER. Over 2,000 miles of "high lines" carefully maintained—provide two and three way service throughout this territory—connecting you at all times with an available capacity of 70,000 horse power—for pumping wells and pipelines—for drilling and lighting wells—for heating flow tanks—for operating loading racks and gasoline recovery plants—IN SHORT, for performing EVERY oil field task, WITHOUT fire hazard.



WEST TEXAS UTILITIES COMPANY
In the Land of Opportunity

LUDLOW VALVES

IRON BODY
BRONZE MOUNTED

ALL IRON
CAST STEEL

ALL SIZES AND PRESSURES

FOR REFINERY PIPE LINE DRILLING & HAND CYLINDER ELECTRICAL OPERATED

DISTRIBUTED BY

MID-CONTINENT SUPPLY CO.
HOUSTON, TEX. FORT WORTH, TEX.

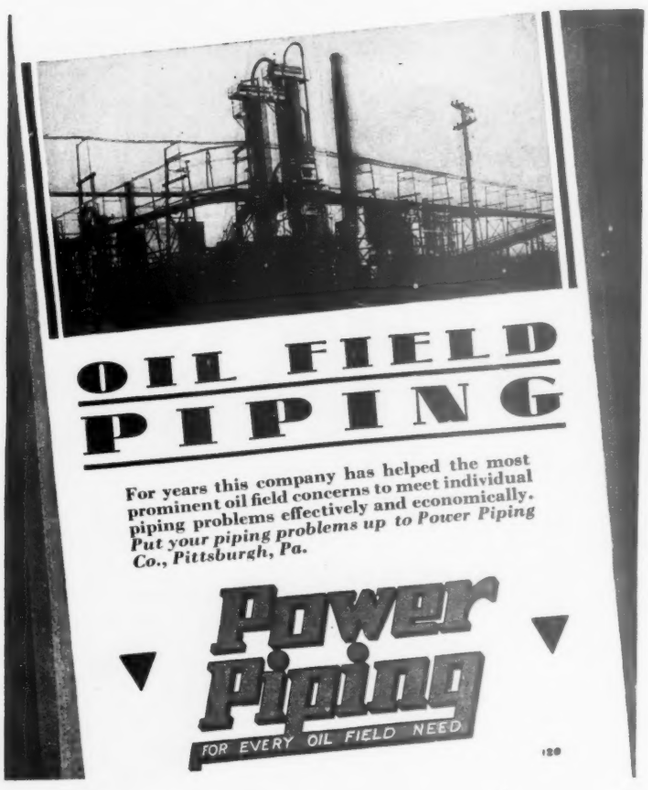
PEDEN IRON & STEEL CO.
SHREVEPORT, LA.

CATALOG ON REQUEST

THE LUDLOW VALVE MFG. CO.
TROY, NEW YORK

KANSAS CITY CHICAGO BOSTON PITTSBURG

TRADE LUDLOW MARK



OIL FIELD PIPING

For years this company has helped the most prominent oil field concerns to meet individual piping problems effectively and economically. *Put your piping problems up to Power Piping Co., Pittsburgh, Pa.*

Power Piping
FOR EVERY OIL FIELD NEED

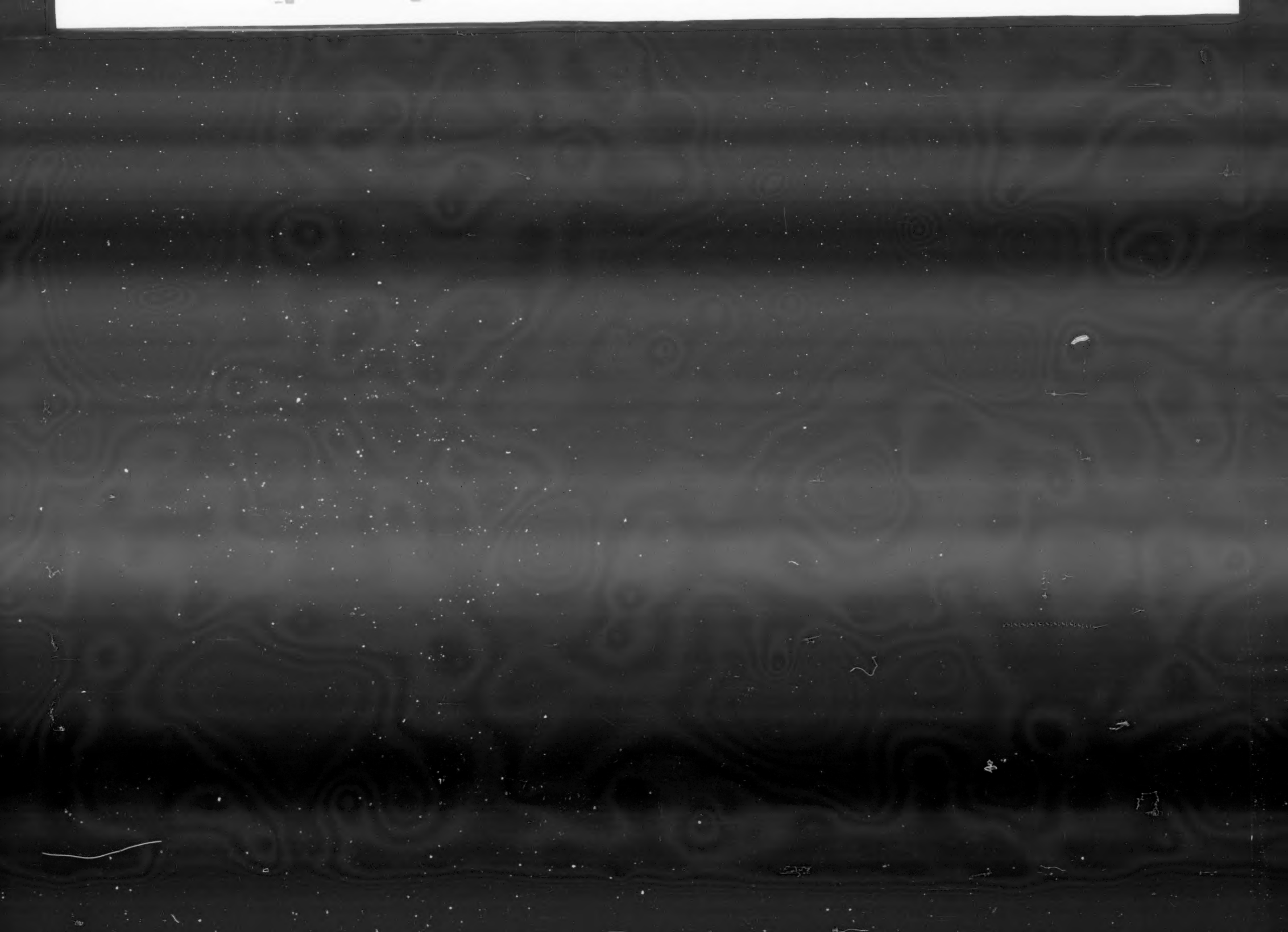
120

STANDARD OIL ISSUES

CARL H. PFORZHEIMER & CO.

(Specialists in Standard Oil and Miscellaneous Oil Securities)

25 Broad Street New York, N. Y.



4 FEATURES OF GASO PUMP, FIG. 1508

1 Main and Pinion Shaft bearings are Timken Tapered Roller Bearings.

2 Main and Pinion Gears of continuous tooth Herringbone construction.

3 H-column Connecting Rod, with babbitt-lined, removable bronze shell at crank end.

4 Pump is fully enclosed, dust-proof, and entirely self lubricated.

HERRINGBONE GEARS—For Easy Running—*and* Reduced Wear

Continuous tooth Herringbone Gears contribute greatly to the easy running and long life of our Fig. 1508 Pump. Exhaustive tests have proven such gears 98.9% to 99.4% mechanically efficient. Teeth are 60% stronger and have 20% to 40% more bearing surface.

The 30-degree helix angle secures the best condition of tooth overlap, insuring the transmission of power with uniform angular velocity. Because the load is transferred from tooth to tooth without shock, wear is reduced and vibration eliminated.

GASO PUMP & BURNER MFG. COMPANY
Tulsa, Okla.

210 Petroleum Bldg., Fort Worth, Texas

535 5th Ave., New York, N. Y.

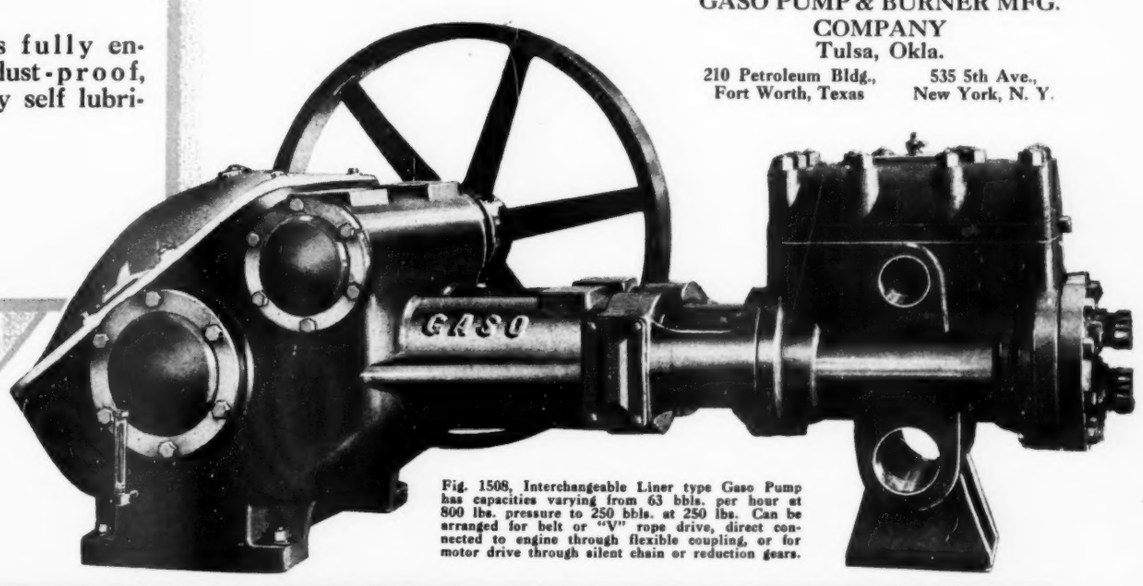


Fig. 1508, Interchangeable Liner type Gaso Pump has capacities varying from 63 bbls. per hour at 800 lbs. pressure to 250 bbls. at 250 lbs. Can be arranged for belt or "V" rope drive, direct connected to engine through flexible coupling, or for motor drive through silent chain or reduction gears.

GASO PUMPS

for every oil industry need

HUGHES SOFT FORMATION CORE BIT

Used with success in VENEZUELA

The uncontaminated cores shown in this picture were taken with a 7⅝" Hughes Soft-Formation Core Bit in the Colon Development Co.'s well, Tara No. 35, in S. W. Venezuela.

The man with the smile is G. H. Murray, Field Geologist for the Colon Development Co.

Formation was Mirador sand stone.

Hughes Core Bits and Cutter Heads Sold by Supply Stores Everywhere

HUGHES TOOL COMPANY

Service Plants
OKLAHOMA CITY, OKLA.
LOS ANGELES, CALIF.

MAIN OFFICE AND PLANT
HOUSTON, TEXAS

EXPORT OFFICE
NEW YORK CITY, N.Y.